

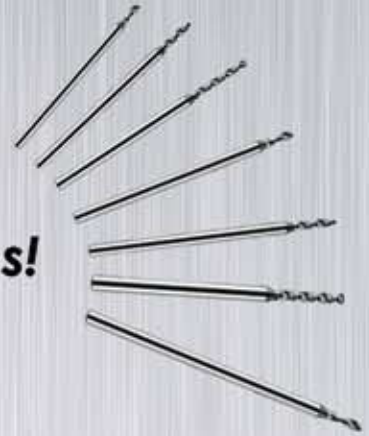
2017-2018



GMauvaisUSA™

A HASSAY SAVAGE COMPANY

Standard MICRO Drill Solutions!



MICRO Drills
0.1mm – 3.0 mm

Division of
Hassay Savage
Company



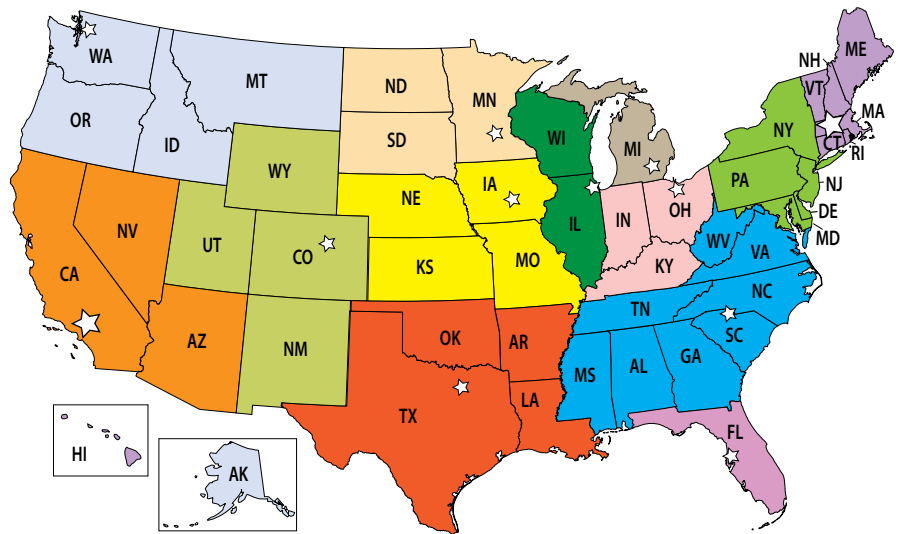
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GMauvaisUSA™
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Superior Micro Drills...

Since 1928 serving the Swiss Watch Industry, our factory in Annecy, France has a global reputation for superior quality and consistency in the production of high precision micro drills in μm Micron tolerances. With innovative and unique manufacturing technologies in turning, bar cutting, grinding, milling, flute grinding, sharpening and heat-treating, we produce products of the most consistent quality and reliable specifications! Our ability to control our high production operations with incredibly tight tolerances, makes us the right choice for all your micro drill needs. We offer a complete range of products in Solid Carbide and Cobalt High Speed Steel

In-process quality controls insure accurate dimensions and perfect surface finishes. Even with the strictest of quality and in-process controls, our production capabilities provide us the flexibility to offer precision, custom specification micro drill solutions for the most unique and demanding micro drill applications. Quality, precision, consistency and outstanding performance are what you can count on from GMauvaisUSA™ from every product we make!

This commitment to consistent quality and performance is relied upon by the most demanding industries. We are a key supplier to the Automotive, Aerospace, Computer / Multi-Media, Medical, Eyewear / Optics, Electronics, Connectors, Watch / Jewelry and Writing Instrument Industries where precision and performance are mandatory in daily production operations!

***Superior Precision, Quality,
Consistency & Performance***

Every Day from GMauvaisUSA™!

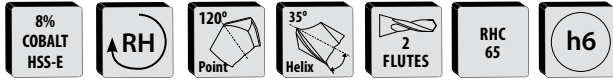


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5100 Series



HSS-E Cobalt 8%

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6140 Series



Solid Carbide

2-3 x D, Center – Pilot – Spot Drills 120° 10

6130 Series

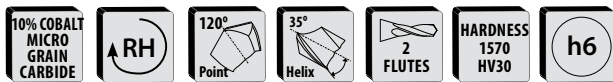


Solid Carbide

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6120 Series

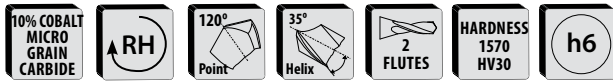


Solid Carbide

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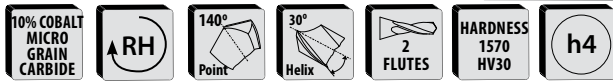
6100 Series



Solid Carbide

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6200 HP Series



Solid Carbide

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HIGH PERFORMANCE!

6220 HP Series



Solid Carbide

12 x D – Depth of Cut 140° 21

HIGH PERFORMANCE!

6230 CT Series



Coolant-Thru

15 x Depth of Cut 140° 22



1100 Series



Solid Carbide

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Solid Carbide

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Solid Carbide

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THE ANATOMY OF A SUPERIOR MICRO DRILL

The **BIG** Picture of a Very **SMALL**, Precision Made Cutting Tool!

Superior Edge Quality & Flute Surface Finishes For **HIGH PERFORMANCE!**

Amazing Dimension Control **AT h6, h4 & h3 μm TOLERANCES!**

Extraordinary Concentricity, Circularity & Straightness **WITHIN 2 MICRONS!**

Ultra-Fine Surface Finish For **SMOOTH OPERATION!**

Consistent, Accurate Dimensions **EVERY TIME!**

Superior HSS Heat Treating & 10% Cobalt Micro Grain Carbide for **OUTSTANDING PERFORMANCE & LONG TOOL LIFE!!**

approximately 10x actual size



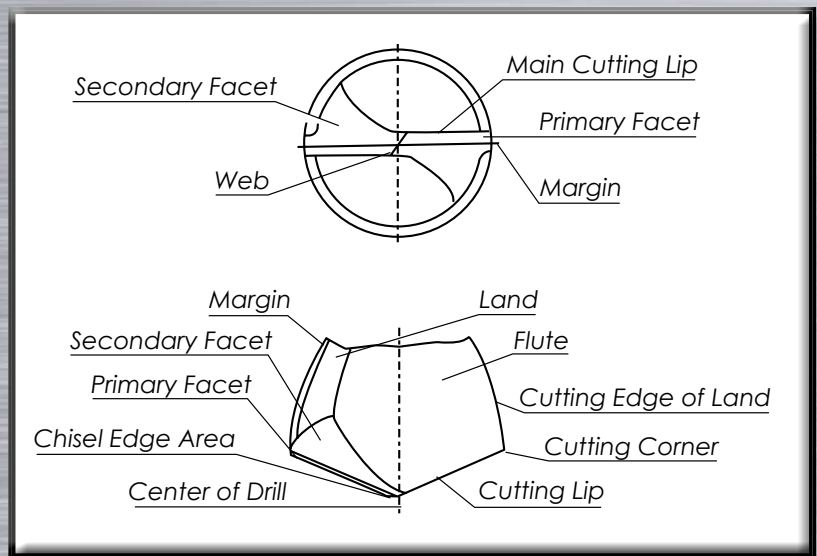
μm

What is a Micron?

1 micron = .001 mm = .00003937"

One Hundreth (1/100) of a Human Hair!

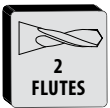
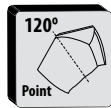
DRILL TERMINOLOGY



See page 4 for Sales Representative Listings

5140 Series

HSS-E Cobalt 8% 2-3 x D, Center Cut – Pilot – Spot Drills 120°

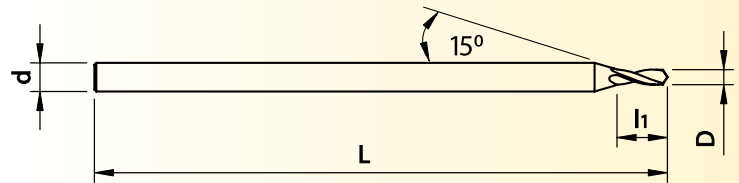


$h6 + 0,000$
 $- 0,006 \text{ mm}$

**FOR USE PRIOR TO USING 5100 SERIES DRILLS. CAN ALSO BE USED AS A DRILL WITH 2-3 X D DEPTH
ALL ITEMS CAN BE ORDERED AS LEFT HAND AT SAME PRICING
SPECIAL, CUSTOM SPECIFICATION ITEMS AVAILABLE**

CUSTOM SPECIFICATIONS SUCH AS:

- Helix angle of 15°, 24°, 30° or other.
- Point Angles of 90°, 110°, 130°, 140° or other.
- Special Diameters as 1,255 mm or other.
- Special Tolerances as +/- 0,001 mm or other.
- Coatings Available upon request.
- Minimum Special Order is 10 Pieces.
- Lead-Time on Specials – 3 Weeks ARO.



OAL 25 mm

SOLD IN 10 PIECE PACKAGES ONLY

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
5140020R	0.20	0.0079	92	1.5	0.6	25
5140025R	0.25	0.0098		1.5	0.8	25
5140030R	0.30	0.0118		1.5	0.9	25
5140035R	0.35	0.0138		1.5	1	25
5140040R	0.40	0.0157		1.5	1	25
5140045R	0.45	0.0177		1.5	1.2	25
5140050R	0.50	0.0197		1.5	1.2	25
5140055R	0.55	0.0217		1.5	1.4	25
5140060R	0.60	0.0236		1.5	1.4	25
5140065R	0.65	0.0256		1.5	1.7	25
5140070R	0.70	0.0276		1.5	1.7	25
5140075R	0.75	0.0295		1.5	1.8	25
5140080R	0.80	0.0315		1.5	1.8	25
5140085R	0.85	0.0335		1.5	1.8	25
5140090R	0.90	0.0354		1.5	1.8	25
5140095R	0.95	0.0374		1.5	2	25
5140100R	1.00	0.0394		1.5	2	25
5140105R	1.05	0.0413		1.5	2.3	25
5140110R	1.10	0.0433		1.5	2.3	25
5140115R	1.15	0.0453		1.5	2.3	25
5140120R	1.20	0.0472		1.5	2.3	25
5140125R	1.25	0.0492		1.5	2.7	25
5140130R	1.30	0.0512		1.5	2.7	25
5140135R	1.35	0.0531		1.5	2.7	25
5140140R	1.40	0.0551	54	1.5	2.7	25
5140145R	1.45	0.0571		1.5	2.7	25
5140150R	1.50	0.0591		2	3	25
5140160R	1.60	0.0630	51	2	3	25

Drill Sizes 0,20 - 3,00 mm

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
5140170R	1.70	0.0669		2	3.3	25
5140180R	1.80	0.0709		2	3.3	25
5140190R	1.90	0.0748		2	3.3	25
5140200R	2.00	0.0787		2	4	25
5140210R	2.10	0.0827		2.5	4	25
5140220R	2.20	0.0866		2.5	4	25
5140230R	2.30	0.0906		2.5	4.6	25
5140240R	2.40	0.0945		2.5	4.6	25
5140250R	2.50	0.0984		2.5	4.6	25
5140260R	2.60	0.1024		3	4.6	25
5140270R	2.70	0.1063		3	5.3	25
5140280R	2.80	0.1102		3	5.3	25
5140290R	2.90	0.1142		3	5.3	25
5140300R	3.00	0.1181		3	5.3	25

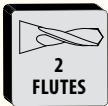
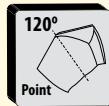
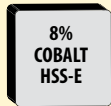
PILOT DRILLS

- For use prior to using 5100 series drills
- Can be used as pilot drill with 2-3 x D Depth

5100 Series HSS-E Cobalt 8%



5 x D – Depth of Cut 120°

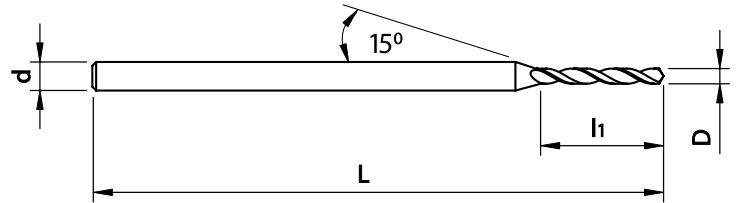


h6 + 0,000
- 0,006 mm

**FOR MATERIALS WITH LONG FORMING CHIPS, STEEL UP TO 35 RHC, COPPER, STAINLESS, TITANIUM
ALL ITEMS CAN BE ORDERED AS LEFT HAND AT SAME PRICING
SPECIAL, CUSTOM SPECIFICATION ITEMS AVAILABLE**

CUSTOM SPECIFICATIONS SUCH AS:

- Helix angle of 15°, 30°, 35° or other.
- Point Angles of 90°, 110°, 130°, 140° or other.
- Special Diameters as 1,255 mm or other.
- Special Tolerances as +/- 0,001 mm or other.
- Coatings Available upon request.
- Minimum Special Order is 10 Pieces.
- Lead-Time on Specials – 3 Weeks ARO.



OAL Range 25 - 40 mm

SOLD IN 10 PIECE PACKAGES ONLY

Drill Sizes 0,10 - 0,65 mm

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
5100010R	0.10	0.0039		1	0.7	25
5100011R	0.11	0.0043		1	0.7	25
5100012R	0.12	0.0047		1	0.7	25
5100013R	0.13	0.0051		1	1	25
5100014R	0.14	0.0055		1	1	25
5100015R	0.15	0.0059	97	1	1	25
5100016R	0.16	0.0063	96	1	1.4	25
5100017R	0.17	0.0067	95	1	1.4	25
5100018R	0.18	0.0071	94	1	1.4	25
5100019R	0.19	0.0075	93	1	1.4	25
5100020R	0.20	0.0079	92	1	1.8	25
5100021R	0.21	0.0083	91	1	1.8	25
5100022R	0.22	0.0087	90	1	1.8	25
5100023R	0.23	0.0091	89	1	1.8	25
5100024R	0.24	0.0094	88	1	1.8	25
5100025R	0.25	0.0098		1	2.2	25
5100026R	0.26	0.0102		1	2.2	25
5100027R	0.27	0.0106	86	1	2.2	25
5100028R	0.28	0.0110	85	1	2.2	25
5100029R	0.29	0.0114	84	1	2.2	25
5100030R	0.30	0.0118		1	2.2	25
5100031R	0.31	0.0122		1	2.8	25
5100032R	0.32	0.0126	82	1	2.8	25
5100033R	0.33	0.0130	81	1	2.8	25
5100034R	0.34	0.0134	80	1	2.8	25
5100035R	0.35	0.0138		1	2.8	25
5100036R	0.36	0.0142		1	2.8	25
5100037R	0.37	0.0146	79	1	2.8	25

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
5100038R	0.38	0.0150		1	2.8	25
5100039R	0.39	0.0154		1	2.8	25
5100040R	0.40	0.0157		1	3.2	25
5100041R	0.41	0.0161	78	1	3.2	25
5100042R	0.42	0.0165		1	3.2	25
5100043R	0.43	0.0169		1	3.2	25
5100044R	0.44	0.0173		1	3.2	25
5100045R	0.45	0.0177		1	3.2	25
5100046R	0.46	0.0181	77	1	3.6	25
5100047R	0.47	0.0185		1	3.6	25
5100048R	0.48	0.0189		1	3.6	25
5100049R	0.49	0.0193		1	3.6	25
5100050R	0.50	0.0197		1	3.6	25
5100051R	0.51	0.0201	76	1.5	4	25
5100052R	0.52	0.0205		1.5	4	25
5100053R	0.53	0.0209	75	1.5	4	25
5100054R	0.54	0.0213		1.5	4	25
5100055R	0.55	0.0217		1.5	4	25
5100056R	0.56	0.0220		1.5	4.5	25
5100057R	0.57	0.0224	74	1.5	4.5	25
5100058R	0.58	0.0228		1.5	4.5	25
5100059R	0.59	0.0232		1.5	4.5	25
5100060R	0.60	0.0236		1.5	4.5	25
5100061R	0.61	0.0240	73	1.5	4.7	25
5100062R	0.62	0.0244		1.5	4.7	25
5100063R	0.63	0.0248	72	1.5	4.7	25
5100064R	0.64	0.0252		1.5	4.7	25
5100065R	0.65	0.0256		1.5	4.7	25

5100 Series Continued

5100 HSS-E Cobalt 8%

Drill Sizes 0,66 - 1,59 mm

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire # Frac	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
5100066R	0.66	0.0260	71	1.5	4.7	25
5100067R	0.67	0.0264		1.5	4.7	25
5100068R	0.68	0.0268		1.5	5.2	25
5100069R	0.69	0.0272		1.5	5.2	25
5100070R	0.70	0.0276		1.5	5.2	25
5100071R	0.71	0.0280	70	1.5	5.2	25
5100072R	0.72	0.0283		1.5	5.2	25
5100073R	0.73	0.0287		1.5	5.2	25
5100074R	0.74	0.0291	69	1.5	5.2	25
5100075R	0.75	0.0295		1.5	5.2	25
5100076R	0.76	0.0299		1.5	5.5	25
5100077R	0.77	0.0303		1.5	5.5	25
5100078R	0.78	0.0307		1.5	5.5	25
5100079R	0.79	0.0311	68 - 1/32	1.5	5.5	25
5100080R	0.80	0.0315		1.5	5.5	25
5100081R	0.81	0.0319	67	1.5	5.5	25
5100082R	0.82	0.0323		1.5	5.5	25
5100083R	0.83	0.0327		1.5	5.5	25
5100084R	0.84	0.0331	66	1.5	5.5	25
5100085R	0.85	0.0335		1.5	5.5	25
5100086R	0.86	0.0339		1.5	6	25
5100087R	0.87	0.0343		1.5	6	25
5100088R	0.88	0.0346		1.5	6	25
5100089R	0.89	0.0350	65	1.5	6	25
5100090R	0.90	0.0354		1.5	6	25
5100091R	0.91	0.0358	64	1.5	6	25
5100092R	0.92	0.0362		1.5	6	25
5100093R	0.93	0.0366		1.5	6	25
5100094R	0.94	0.0370	63	1.5	6	25
5100095R	0.95	0.0374		1.5	6	25
5100096R	0.96	0.0378	62	1.5	6.5	25
5100097R	0.97	0.0382		1.5	6.5	25
5100098R	0.98	0.0386		1.5	6.5	25
5100099R	0.99	0.0390	61	1.5	6.5	25
5100100R	1.00	0.0394		1.5	6.5	25
5100101R	1.01	0.0398	60	1.5	6.5	25
5100102R	1.02	0.0402		1.5	6.5	25
5100103R	1.03	0.0406		1.5	6.5	25
5100104R	1.04	0.0409	59	1.5	6.5	25
5100105R	1.05	0.0413		1.5	6.5	25
5100106R	1.06	0.0417		1.5	7	25
5100107R	1.07	0.0421	58	1.5	7	25
5100108R	1.08	0.0425		1.5	7	25
5100109R	1.09	0.0429	57	1.5	7	25
5100110R	1.10	0.0433		1.5	7	25
5100111R	1.11	0.0437		1.5	7	25
5100112R	1.12	0.0441		1.5	7	25

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire # Frac	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
5100113R	1.13	0.0445		1.5	7	25
5100114R	1.14	0.0449		1.5	7	25
5100115R	1.15	0.0453		1.5	7	25
5100116R	1.16	0.0457		1.5	7.5	25
5100117R	1.17	0.0461		1.5	7.5	25
5100118R	1.18	0.0465	56	1.5	7.5	25
5100119R	1.19	0.0469	3/64	1.5	7.5	25
5100120R	1.20	0.0472		1.5	7.5	25
5100121R	1.21	0.0476		1.5	7.5	25
5100122R	1.22	0.0480		1.5	7.5	25
5100123R	1.23	0.0484		1.5	7.5	25
5100124R	1.24	0.0488		1.5	7.5	25
5100125R	1.25	0.0492		1.5	7.5	25
5100126R	1.26	0.0496		1.5	7.5	25
5100127R	1.27	0.0500		1.5	7.5	25
5100128R	1.28	0.0504		1.5	7.5	25
5100129R	1.29	0.0508		1.5	7.5	25
5100130R	1.30	0.0512		1.5	7.5	25
5100131R	1.31	0.0516		1.5	8.5	25
5100132R	1.32	0.0520	55	1.5	8.5	25
5100133R	1.33	0.0524		1.5	8.5	25
5100134R	1.34	0.0528		1.5	8.5	25
5100135R	1.35	0.0531		1.5	8.5	25
5100136R	1.36	0.0535		1.5	8.5	25
5100137R	1.37	0.0539		1.5	8.5	25
5100138R	1.38	0.0543		1.5	8.5	25
5100139R	1.39	0.0547		1.5	8.5	25
5100140R	1.40	0.0551	54	1.5	8.5	25
5100141R	1.41	0.0555		1.5	8.5	25
5100142R	1.42	0.0559		1.5	8.5	25
5100143R	1.43	0.0563		1.5	8.5	25
5100144R	1.44	0.0567		1.5	8.5	25
5100145R	1.45	0.0571		1.5	8.5	25
5100146R	1.46	0.0575		1.5	8.5	25
5100147R	1.47	0.0579		1.5	8.5	25
5100148R	1.48	0.0583		1.5	8.5	25
5100149R	1.49	0.0587		1.5	8.5	25
5100150R	1.50	0.0591		2	10	35
5100151R	1.51	0.0594	53	2	10	35
5100152R	1.52	0.0598		2	10	35
5100153R	1.53	0.0602		2	10	35
5100154R	1.54	0.0606		2	10	35
5100155R	1.55	0.0610		2	10	35
5100156R	1.56	0.0614		2	10	35
5100157R	1.57	0.0618		2	10	35
5100158R	1.58	0.0622		2	10	35
5100159R	1.59	0.0626	1/16	2	10	35

SOLD IN 10 PIECE PACKAGES ONLY

5100 Series Continued

5100 HSS-E Cobalt 8%

Drill Sizes 1,60 - 2,53 mm

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire # Frac	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
5100160R	1.60	0.0630		2	10	35
5100161R	1.61	0.0634	52	2	10	35
5100162R	1.62	0.0638		2	10	35
5100163R	1.63	0.0642		2	10	35
5100164R	1.64	0.0646		2	10	35
5100165R	1.65	0.0650		2	10	35
5100166R	1.66	0.0654		2	10	35
5100167R	1.67	0.0657		2	10	35
5100168R	1.68	0.0661		2	10	35
5100169R	1.69	0.0665		2	10	35
5100170R	1.70	0.0669	51	2	10	35
5100171R	1.71	0.0673		2	10	35
5100172R	1.72	0.0677		2	10	35
5100173R	1.73	0.0681		2	10	35
5100174R	1.74	0.0685		2	10	35
5100175R	1.75	0.0689		2	10	35
5100176R	1.76	0.0693		2	10	35
5100177R	1.77	0.0697		2	11	35
5100178R	1.78	0.0701	50	2	11	35
5100179R	1.79	0.0705		2	11	35
5100180R	1.80	0.0709		2	11	35
5100181R	1.81	0.0713		2	11	35
5100182R	1.82	0.0717		2	11	35
5100183R	1.83	0.0720		2	11	35
5100184R	1.84	0.0724		2	11	35
5100185R	1.85	0.0728	49	2	11	35
5100186R	1.86	0.0732		2	11	35
5100187R	1.87	0.0736		2	11	35
5100188R	1.88	0.0740		2	11	35
5100189R	1.89	0.0744		2	11	35
5100190R	1.90	0.0748		2	11	35
5100191R	1.91	0.0752		2	11	35
5100192R	1.92	0.0756		2	11	35
5100193R	1.93	0.0760	48	2	11	35
5100194R	1.94	0.0764		2	11	35
5100195R	1.95	0.0768		2	11	35
5100196R	1.96	0.0772		2	11	35
5100197R	1.97	0.0776		2	11	35
5100198R	1.98	0.0780	5/64	2	11	35
5100199R	1.99	0.0783	47	2	11	35
5100200R	2.00	0.0787		2	11	35
5100201R	2.01	0.0791		2.5	12	35
5100202R	2.02	0.0795		2.5	12	35
5100203R	2.03	0.0799		2.5	12	35
5100204R	2.04	0.0803		2.5	12	35
5100205R	2.05	0.0807		2.5	12	35
5100206R	2.06	0.0811	46	2.5	12	35

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire # Frac	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
5100207R	2.07	0.0815		2.5	12	35
5100208R	2.08	0.0819	45	2.5	12	35
5100209R	2.09	0.0823		2.5	12	35
5100210R	2.10	0.0827		2.5	12	35
5100211R	2.11	0.0831		2.5	12	35
5100212R	2.12	0.0835		2.5	12	35
5100213R	2.13	0.0839		2.5	12	35
5100214R	2.14	0.0843		2.5	12	35
5100215R	2.15	0.0846		2.5	12	35
5100216R	2.16	0.0850		2.5	12	35
5100217R	2.17	0.0854		2.5	12	35
5100218R	2.18	0.0858	44	2.5	12	35
5100219R	2.19	0.0862		2.5	12	35
5100220R	2.20	0.0866		2.5	12	35
5100221R	2.21	0.0870		2.5	14	35
5100222R	2.22	0.0874		2.5	14	35
5100223R	2.23	0.0878		2.5	14	35
5100224R	2.24	0.0882		2.5	14	35
5100225R	2.25	0.0886		2.5	14	35
5100226R	2.26	0.0890	43	2.5	14	35
5100227R	2.27	0.0894		2.5	14	35
5100228R	2.28	0.0898		2.5	14	35
5100229R	2.29	0.0902		2.5	14	35
5100230R	2.30	0.0906		2.5	14	35
5100231R	2.31	0.0909		2.5	14	35
5100232R	2.32	0.0913		2.5	14	35
5100233R	2.33	0.0917		2.5	14	35
5100234R	2.34	0.0921		2.5	14	35
5100235R	2.35	0.0925		2.5	14	35
5100236R	2.36	0.0929		2.5	14	35
5100237R	2.37	0.0933		2.5	14	35
5100238R	2.38	0.0937	3/32	2.5	14	35
5100239R	2.39	0.0941		2.5	14	35
5100240R	2.40	0.0945		2.5	14	35
5100241R	2.41	0.0949		2.5	14	35
5100242R	2.42	0.0953		2.5	14	35
5100243R	2.43	0.0957		2.5	14	35
5100244R	2.44	0.0961	41	2.5	14	35
5100245R	2.45	0.0965		2.5	14	35
5100246R	2.46	0.0969		2.5	14	35
5100247R	2.47	0.0972		2.5	14	35
5100248R	2.48	0.0976		2.5	14	35
5100249R	2.49	0.0980	40	2.5	14	35
5100250R	2.50	0.0984		2.5	14	35
5100251R	2.51	0.0988		3	16	40
5100252R	2.52	0.0992		3	16	40
5100253R	2.53	0.0996	39	3	16	40

SOLD IN 10 PIECE PACKAGES ONLY

5100 Series Continued

5100 HSS-E Cobalt 8%

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire # Frac	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
5100254R	2.54	0.1000		3	16	40
5100255R	2.55	0.1004		3	16	40
5100256R	2.56	0.1008		3	16	40
5100257R	2.57	0.1012		3	16	40
5100258R	2.58	0.1016	38	3	16	40
5100259R	2.59	0.1020		3	16	40
5100260R	2.60	0.1024		3	16	40
5100261R	2.61	0.1028		3	16	40
5100262R	2.62	0.1031		3	16	40
5100263R	2.63	0.1035		3	16	40
5100264R	2.64	0.1039	37	3	16	40
5100265R	2.65	0.1043		3	16	40
5100266R	2.66	0.1047		3	16	40
5100267R	2.67	0.1051		3	16	40
5100268R	2.68	0.1055		3	16	40
5100269R	2.69	0.1059		3	16	40
5100270R	2.70	0.1063	36	3	16	40
5100271R	2.71	0.1067		3	16	40
5100272R	2.72	0.1071		3	16	40
5100273R	2.73	0.1075		3	16	40
5100274R	2.74	0.1079		3	16	40
5100275R	2.75	0.1083		3	16	40
5100276R	2.76	0.1087		3	18	40
5100277R	2.77	0.1091		3	18	40

Drill Sizes 2,54 - 3,00 mm

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire # Frac	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
5100278R	2.78	0.1094	7/64	3	18	40
5100279R	2.79	0.1098	35	3	18	40
5100280R	2.80	0.1102		3	18	40
5100281R	2.81	0.1106		3	18	40
5100282R	2.82	0.1110	34	3	18	40
5100283R	2.83	0.1114		3	18	40
5100284R	2.84	0.1118		3	18	40
5100285R	2.85	0.1122		3	18	40
5100286R	2.86	0.1126		3	18	40
5100287R	2.87	0.1130	33	3	18	40
5100288R	2.88	0.1134		3	18	40
5100289R	2.89	0.1138		3	18	40
5100290R	2.90	0.1142		3	18	40
5100291R	2.91	0.1146		3	18	40
5100292R	2.92	0.1150		3	18	40
5100293R	2.93	0.1154		3	18	40
5100294R	2.94	0.1157		3	18	40
5100295R	2.95	0.1161	32	3	18	40
5100296R	2.96	0.1165		3	18	40
5100297R	2.97	0.1169		3	18	40
5100298R	2.98	0.1173		3	18	40
5100299R	2.99	0.1177		3	18	40
5100300R	3.00	0.1181		3	18	40

SOLD IN 10 PIECE PACKAGES ONLY

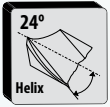
5100 HSS-E Cobalt 8%



- For materials with long forming chips, steel up to 35 RHC, Copper, Stainless, Titanium
- Amazing dimension control at h6, h4 & h3 μ m tolerances
- Ultra-fine surface finish for smooth operation
- Superb heat treating for outstanding performance & long tool life
- Coatings available upon request

6140 Series Solid Carbide

2-3 x D, Center Cut – Pilot – Spot Drills 120°

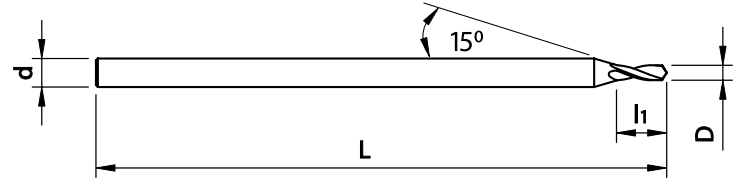


$h6 \pm 0,000$
 $- 0,006 \text{ mm}$

**FOR USE PRIOR TO USING 6120 & 6100 SERIES DRILLS. CAN ALSO BE USED AS A DRILL WITH 2-3 X D DEEP
ALL ITEMS CAN BE ORDERED AS LEFT HAND AT SAME PRICING
SPECIAL, CUSTOM SPECIFICATION ITEMS AVAILABLE**

CUSTOM SPECIFICATIONS SUCH AS:

- Helix angle of 15°, 30°, 35° or other.
- Point Angles of 90°, 110°, 130°, 140° or other.
- Special Diameters as 0,92 mm or other.
- Special Tolerances as +/- 0,001 mm or other.
- Coolant Through Drills at 3 & 4 mm shanks & 1,25 to 3 mm flute diameters.
- Coatings Available upon request.
- Minimum Special Order is 10 Pieces.
- Lead-Time on Specials – 3 Weeks ARO.



OAL Range 30 - 38 mm

SOLD IN 10 PIECE PACKAGES ONLY

Drill Sizes 0,20 - 3,00 mm

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
6140020R	0.20	0.0079	92	1.5	0.9	30
6140025R	0.25	0.0098		1.5	0.9	30
6140030R	0.30	0.0118		1.5	0.9	30
6140035R	0.35	0.0138		1.5	1.2	30
6140040R	0.40	0.0157		1.5	1.5	30
6140045R	0.45	0.0177		1.5	1.5	30
6140050R	0.50	0.0197		1.5	1.9	30
6140055R	0.55	0.0217		1.5	1.9	30
6140060R	0.60	0.0236		1.5	1.9	30
6140065R	0.65	0.0256		1.5	2.1	30
6140070R	0.70	0.0276		1.5	2.4	30
6140075R	0.75	0.0295		1.5	2.4	30
6140080R	0.80	0.0315		1.5	2.6	30
6140085R	0.85	0.0335		1.5	2.6	30
6140090R	0.90	0.0354		1.5	3	30
6140095R	0.95	0.0374		1.5	3	30
6140100R	1.00	0.0394		1.5	3.4	30
6140105R	1.05	0.0413		1.5	3.4	30
6140110R	1.10	0.0433		1.5	3.8	30
6140115R	1.15	0.0453		1.5	3.8	30
6140120R	1.20	0.0472		1.5	4.2	30

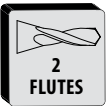
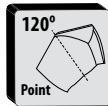
Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
6140125R	1.25	0.0492		1.5	4.2	30
6140130R	1.30	0.0512		1.5	4.2	30
6140135R	1.35	0.0531		1.5	4.7	30
6140140R	1.40	0.0551	54	1.5	4.7	30
6140145R	1.45	0.0571		1.5	4.7	30
6140150R	1.50	0.0591		2	4.7	38
6140160R	1.60	0.0630	51	2	5.4	38
6140170R	1.70	0.0669		2	5.4	38
6140180R	1.80	0.0709		2	6.5	38
6140190R	1.90	0.0748		2	6.5	38
6140200R	2.00	0.0787		3	6.5	38
6140210R	2.10	0.0827		3	6.5	38
6140220R	2.20	0.0866		3	6.5	38
6140230R	2.30	0.0906		3	6.5	38
6140240R	2.40	0.0945		3	6.5	38
6140250R	2.50	0.0984		3	7.5	38
6140260R	2.60	0.1024		3	7.5	38
6140270R	2.70	0.1063		3	7.5	38
6140280R	2.80	0.1102		3	7.5	38
6140290R	2.90	0.1142		3	7.5	38
6140300R	3.00	0.1181		3	7.5	38

3mm Shank Tools

6130 Series Solid Carbide

4-5 x D – Depth of Cut 120°

h6 Tolerance
Reinforced Shank d 3,0 mm



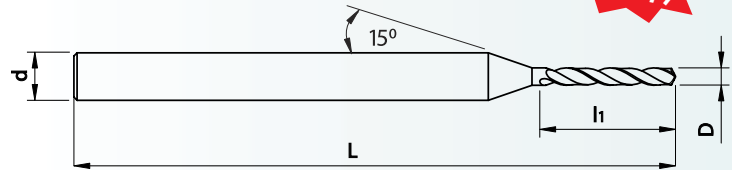
+0/-0.006mm (h6) For Uncoated Version
+0,002/-0,004mm For Coated Version

FOR SOFT, MEDIUM TO HIGH TENSILE STRENGTH STEEL, STAINLESS, TITANIUM ALLOYS & CAST IRON
ALL ITEMS CAN BE ORDERED AS LEFT HAND AT SAME PRICING
SPECIAL, CUSTOM SPECIFICATION ITEMS AVAILABLE



CUSTOM SPECIFICATIONS SUCH AS:

- Helix angle of 15°, 30°, 35° or other.
- Point Angles of 90°, 110°, 130°, 140° or other.
- Special Diameters as 1,255 mm or other.
- Special Tolerances as +/- 0,001 mm or other.
- Minimum Special Order is 10 Pieces.
- Lead-Time on Specials – 3 Weeks ARO.



OAL Range 38 mm

SOLD IN 10 PIECE PACKAGES ONLY

Drill Sizes 0,20 - 0,88 mm

Uncoated (R) Order Number	TiAlN Coated (RC) Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
6130020R	6130020RC	0.20	0.0079	92	3.00	1.1	38
6130021R	6130021RC	0.21	0.0083	91	3.00	1.1	38
6130022R	6130022RC	0.22	0.0087	90	3.00	1.1	38
6130023R	6130023RC	0.23	0.0091	89	3.00	1.1	38
6130024R	6130024RC	0.24	0.0094	88	3.00	1.1	38
6130025R	6130025RC	0.25	0.0098		3.00	1.3	38
6130026R	6130026RC	0.26	0.0102		3.00	1.3	38
6130027R	6130027RC	0.27	0.0106	86	3.00	1.3	38
6130028R	6130028RC	0.28	0.0110	85	3.00	1.3	38
6130029R	6130029RC	0.29	0.0114	84	3.00	1.3	38
6130030R	6130030RC	0.30	0.0118		3.00	1.6	38
6130031R	6130031RC	0.31	0.0122		3.00	1.6	38
6130032R	6130032RC	0.32	0.0126	82	3.00	1.6	38
6130033R	6130033RC	0.33	0.0130	81	3.00	1.6	38
6130034R	6130034RC	0.34	0.0134	80	3.00	1.6	38
6130035R	6130035RC	0.35	0.0138		3.00	1.6	38
6130036R	6130036RC	0.36	0.0142		3.00	1.6	38
6130037R	6130037RC	0.37	0.0146	79	3.00	1.6	38
6130038R	6130038RC	0.38	0.0150		3.00	1.6	38
6130039R	6130039RC	0.39	0.0154		3.00	2	38
6130040R	6130040RC	0.40	0.0157		3.00	2	38
6130041R	6130041RC	0.41	0.0161	78	3.00	2	38
6130042R	6130042RC	0.42	0.0165		3.00	2	38
6130043R	6130043RC	0.43	0.0169		3.00	2	38
6130044R	6130044RC	0.44	0.0173		3.00	2	38
6130045R	6130045RC	0.45	0.0177		3.00	2	38
6130046R	6130046RC	0.46	0.0181	77	3.00	2	38
6130047R	6130047RC	0.47	0.0185		3.00	2	38
6130048R	6130048RC	0.48	0.0189		3.00	2	38
6130049R	6130049RC	0.49	0.0193		3.00	2	38
6130050R	6130050RC	0.50	0.0197		3.00	2.4	38
6130051R	6130051RC	0.51	0.0201	76	3.00	2.4	38
6130052R	6130052RC	0.52	0.0205		3.00	2.4	38
6130053R	6130053RC	0.53	0.0209	75	3.00	2.4	38
6130054R	6130054RC	0.54	0.0213		3.00	2.8	38

Uncoated (R) Order Number	TiAlN Coated (RC) Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
6130055R	6130055RC	0.55	0.0217		3.00	2.8	38
6130056R	6130056RC	0.56	0.0220		3.00	2.8	38
6130057R	6130057RC	0.57	0.0224	74	3.00	2.8	38
6130058R	6130058RC	0.58	0.0228		3.00	2.8	38
6130059R	6130059RC	0.59	0.0232		3.00	2.8	38
6130060R	6130060RC	0.60	0.0236		3.00	2.8	38
6130061R	6130061RC	0.61	0.0240	73	3.00	3.3	38
6130062R	6130062RC	0.62	0.0244		3.00	3.3	38
6130063R	6130063RC	0.63	0.0248	72	3.00	3.3	38
6130064R	6130064RC	0.64	0.0252		3.00	3.3	38
6130065R	6130065RC	0.65	0.0256		3.00	3.3	38
6130066R	6130066RC	0.66	0.0260	71	3.00	3.3	38
6130067R	6130067RC	0.67	0.0264		3.00	3.3	38
6130068R	6130068RC	0.68	0.0268		3.00	3.8	38
6130069R	6130069RC	0.69	0.0272		3.00	3.8	38
6130070R	6130070RC	0.70	0.0276		3.00	3.8	38
6130071R	6130071RC	0.71	0.0280	70	3.00	3.8	38
6130072R	6130072RC	0.72	0.0283		3.00	3.8	38
6130073R	6130073RC	0.73	0.0287		3.00	3.8	38
6130074R	6130074RC	0.74	0.0291	69	3.00	3.8	38
6130075R	6130075RC	0.75	0.0295		3.00	3.8	38
6130076R	6130076RC	0.76	0.0299		3.00	4.2	38
6130077R	6130077RC	0.77	0.0303		3.00	4.2	38
6130078R	6130078RC	0.78	0.0307		3.00	4.2	38
6130079R	6130079RC	0.79	0.0311	68 - 1/32	3.00	4.2	38
6130080R	6130080RC	0.80	0.0315		3.00	4.4	38
6130081R	6130081RC	0.81	0.0319	67	3.00	4.4	38
6130082R	6130082RC	0.82	0.0323		3.00	4.4	38
6130083R	6130083RC	0.83	0.0327		3.00	4.4	38
6130084R	6130084RC	0.84	0.0331	66	3.00	4.4	38
6130085R	6130085RC	0.85	0.0335		3.00	4.4	38
6130086R	6130086RC	0.86	0.0339		3.00	4.8	38
6130087R	6130087RC	0.87	0.0343		3.00	4.8	38
6130088R	6130088RC	0.88	0.0346		3.00	4.8	38

6130 Series Continued

6130 Series Solid Carbide



3mm Shank Tools

6130 Series Continued

Uncoated (R) Order Number	Coated (RC) Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
6130089R	6130089RC	0.89	0.0350	65	3.00	4.8	38
6130090R	6130090RC	0.90	0.0354		3.00	4.8	38
6130091R	6130091RC	0.91	0.0358	64	3.00	4.8	38
6130092R	6130092RC	0.92	0.0362		3.00	4.8	38
6130093R	6130093RC	0.93	0.0366		3.00	4.8	38
6130094R	6130094RC	0.94	0.0370	63	3.00	4.8	38
6130095R	6130095RC	0.95	0.0374		3.00	4.8	38
6130096R	6130096RC	0.96	0.0378	62	3.00	4.8	38
6130097R	6130097RC	0.97	0.0382		3.00	4.8	38
6130098R	6130098RC	0.98	0.0386		3.00	4.8	38
6130099R	6130099RC	0.99	0.0390	61	3.00	4.8	38
6130100R	6130100RC	1.00	0.0394		3.00	4.8	38
6130101R	6130101RC	1.01	0.0398	60	3.00	4.8	38
6130102R	6130102RC	1.02	0.0402		3.00	4.8	38
6130103R	6130103RC	1.03	0.0406		3.00	4.8	38
6130104R	6130104RC	1.04	0.0409	59	3.00	4.8	38
6130105R	6130105RC	1.05	0.0413		3.00	4.8	38
6130106R	6130106RC	1.06	0.0417		3.00	4.8	38
6130107R	6130107RC	1.07	0.0421	58	3.00	4.8	38
6130108R	6130108RC	1.08	0.0425		3.00	4.8	38
6130109R	6130109RC	1.09	0.0429	57	3.00	4.8	38
6130110R	6130110RC	1.10	0.0433		3.00	5.4	38
6130111R	6130111RC	1.11	0.0437		3.00	5.4	38
6130112R	6130112RC	1.12	0.0441		3.00	5.4	38
6130113R	6130113RC	1.13	0.0445		3.00	5.4	38
6130114R	6130114RC	1.14	0.0449		3.00	5.4	38
6130115R	6130115RC	1.15	0.0453		3.00	5.4	38
6130116R	6130116RC	1.16	0.0457		3.00	5.4	38
6130117R	6130117RC	1.17	0.0461		3.00	5.4	38
6130118R	6130118RC	1.18	0.0465	56	3.00	5.4	38
6130119R	6130119RC	1.19	0.0469	3/64	3.00	5.4	38
6130120R	6130120RC	1.20	0.0472		3.00	6	38
6130121R	6130121RC	1.21	0.0476		3.00	6	38
6130122R	6130122RC	1.22	0.0480		3.00	6	38
6130123R	6130123RC	1.23	0.0484		3.00	6	38
6130124R	6130124RC	1.24	0.0488		3.00	6	38
6130125R	6130125RC	1.25	0.0492		3.00	6	38
6130126R	6130126RC	1.26	0.0496		3.00	6	38
6130127R	6130127RC	1.27	0.0500		3.00	6	38
6130128R	6130128RC	1.28	0.0504		3.00	6	38
6130129R	6130129RC	1.29	0.0508		3.00	6	38
6130130R	6130130RC	1.30	0.0512		3.00	6.7	38
6130131R	6130131RC	1.31	0.0516		3.00	6.7	38
6130132R	6130132RC	1.32	0.0520	55	3.00	6.7	38
6130133R	6130133RC	1.33	0.0524		3.00	6.7	38
6130134R	6130134RC	1.34	0.0528		3.00	6.7	38
6130135R	6130135RC	1.35	0.0531		3.00	6.7	38
6130136R	6130136RC	1.36	0.0535		3.00	6.7	38
6130137R	6130137RC	1.37	0.0539		3.00	6.7	38
6130138R	6130138RC	1.38	0.0543		3.00	6.7	38
6130139R	6130139RC	1.39	0.0547		3.00	6.7	38
6130140R	6130140RC	1.40	0.0551	54	3.00	6.7	38
6130141R	6130141RC	1.41	0.0555		3.00	6.7	38
6130142R	6130142RC	1.42	0.0559		3.00	6.7	38
6130143R	6130143RC	1.43	0.0563		3.00	6.7	38
6130144R	6130144RC	1.44	0.0567		3.00	6.7	38

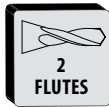
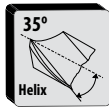
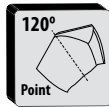
Uncoated (R) Order Number	Coated (RC) Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
6130145R	6130145RC	1.45	0.0571		3.00	6.7	38
6130146R	6130146RC	1.46	0.0575		3.00	6.7	38
6130147R	6130147RC	1.47	0.0579		3.00	6.7	38
6130148R	6130148RC	1.48	0.0583		3.00	6.7	38
6130149R	6130149RC	1.49	0.0587		3.00	6.7	38
6130150R	6130150RC	1.50	0.0591		3.00	7.2	38
6130151R	6130151RC	1.51	0.0594	53	3.00	7.2	38
6130152R	6130152RC	1.52	0.0598		3.00	7.2	38
6130153R	6130153RC	1.53	0.0602		3.00	7.2	38
6130154R	6130154RC	1.54	0.0606		3.00	7.2	38
6130155R	6130155RC	1.55	0.0610		3.00	7.2	38
6130156R	6130156RC	1.56	0.0614		3.00	7.2	38
6130157R	6130157RC	1.57	0.0618		3.00	7.2	38
6130158R	6130158RC	1.58	0.0622		3.00	7.2	38
6130159R	6130159RC	1.59	0.0626	1/16	3.00	7.2	38
6130160R	6130160RC	1.60	0.0630		3.00	7.2	38
6130161R	6130161RC	1.61	0.0634	52	3.00	7.2	38
6130162R	6130162RC	1.62	0.0638		3.00	7.2	38
6130163R	6130163RC	1.63	0.0642		3.00	7.2	38
6130164R	6130164RC	1.64	0.0646		3.00	7.2	38
6130165R	6130165RC	1.65	0.0650		3.00	7.2	38
6130166R	6130166RC	1.66	0.0654		3.00	7.2	38
6130167R	6130167RC	1.67	0.0657		3.00	7.2	38
6130168R	6130168RC	1.68	0.0661		3.00	7.2	38
6130169R	6130169RC	1.69	0.0665		3.00	7.2	38
6130170R	6130170RC	1.70	0.0669	51	3.00	7.2	38
6130171R	6130171RC	1.71	0.0673		3.00	7.2	38
6130172R	6130172RC	1.72	0.0677		3.00	7.2	38
6130173R	6130173RC	1.73	0.0681		3.00	7.2	38
6130174R	6130174RC	1.74	0.0685		3.00	7.2	38
6130175R	6130175RC	1.75	0.0689		3.00	7.2	38
6130176R	6130176RC	1.76	0.0693		3.00	7.2	38
6130177R	6130177RC	1.77	0.0697		3.00	7.2	38
6130178R	6130178RC	1.78	0.0701	50	3.00	7.2	38
6130179R	6130179RC	1.79	0.0705		3.00	7.2	38
6130180R	6130180RC	1.80	0.0709		3.00	8.4	38
6130181R	6130181RC	1.81	0.0713		3.00	8.4	38
6130182R	6130182RC	1.82	0.0717		3.00	8.4	38
6130183R	6130183RC	1.83	0.0720		3.00	8.4	38
6130184R	6130184RC	1.84	0.0724		3.00	8.4	38
6130185R	6130185RC	1.85	0.0728	49	3.00	8.4	38
6130186R	6130186RC	1.86	0.0732		3.00	8.4	38
6130187R	6130187RC	1.87	0.0736		3.00	8.4	38
6130188R	6130188RC	1.88	0.0740		3.00	8.4	38
6130189R	6130189RC	1.89	0.0744		3.00	8.4	38
6130190R	6130190RC	1.90	0.0748		3.00	8.4	38
6130191R	6130191RC	1.91	0.0752		3.00	8.4	38
6130192R	6130192RC	1.92	0.0756		3.00	8.4	38
6130193R	6130193RC	1.93	0.0760	48	3.00	8.4	38
6130194R	6130194RC	1.94	0.0764		3.00	8.4	38
6130195R	6130195RC	1.95	0.0768		3.00	8.4	38
6130196R	6130196RC	1.96	0.0772		3.00	8.4	38
6130197R	6130197RC	1.97	0.0776		3.00	8.4	38
6130198R	6130198RC	1.98	0.0780	5/64	3.00	8.4	38
6130199R	6130199RC	1.99	0.0783	47	3.00	8.4	38

For 2,00 to 3,00mm x 3mm Shank → Go to 6120 Series

SOLD IN 10 PIECE PACKAGES ONLY

6120 Series Solid Carbide

4-5 x D – Depth of Cut 120°

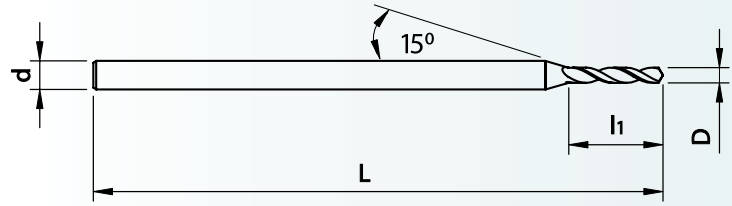


$h6 \pm 0,000$
 $- 0,006 \text{ mm}$

FOR MEDIUM TO HIGH TENSILE STRENGTH STEEL, STAINLESS, TITANIUM ALLOYS & CAST IRON
ALL ITEMS CAN BE ORDERED AS LEFT HAND AT SAME PRICING
SPECIAL, CUSTOM SPECIFICATION ITEMS AVAILABLE

CUSTOM SPECIFICATIONS SUCH AS:

- Helix angle of 15°, 24°, 30° or other.
- Point Angles of 90°, 110°, 130°, 140° or other.
- Special Diameters as 1,255 mm or other.
- Special Tolerances as +/- 0,001 mm or other.
- Coolant Through Drills at 3 & 4 mm shanks & 1,25 to 3 mm flute diameters.
- Coatings Available upon request.
- Minimum Special Order is 10 Pieces / Spec.
- Lead-Time on Specials – 3 Weeks ARO.



OAL Range 25 - 38 mm

SOLD IN 10 PIECE PACKAGES ONLY

Drill Sizes 0,20 - 0,71 mm

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
6120020R	0.20	0.0079	92	1	1.1	25
6120021R	0.21	0.0083	91	1	1.1	25
6120022R	0.22	0.0087	90	1	1.1	25
6120023R	0.23	0.0091	89	1	1.1	25
6120024R	0.24	0.0094	88	1	1.1	25
6120025R	0.25	0.0098		1	1.3	25
6120026R	0.26	0.0102		1	1.3	25
6120027R	0.27	0.0106	86	1	1.3	25
6120028R	0.28	0.0110	85	1	1.3	25
6120029R	0.29	0.0114	84	1	1.3	25
6120030R	0.30	0.0118		1	1.6	25
6120031R	0.31	0.0122		1	1.6	25
6120032R	0.32	0.0126	82	1	1.6	25
6120033R	0.33	0.0130	81	1	1.6	25
6120034R	0.34	0.0134	80	1	1.6	25
6120035R	0.35	0.0138		1	1.6	25
6120036R	0.36	0.0142		1	1.6	25
6120037R	0.37	0.0146	79	1	1.6	25
6120038R	0.38	0.0150		1	1.6	25
6120039R	0.39	0.0154		1	2	25
6120040R	0.40	0.0157		1	2	25
6120041R	0.41	0.0161	78	1	2	25
6120042R	0.42	0.0165		1	2	25
6120043R	0.43	0.0169		1	2	25
6120044R	0.44	0.0173		1	2	25
6120045R	0.45	0.0177		1	2	25

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
6120046R	0.46	0.0181	77	1	2	25
6120047R	0.47	0.0185		1	2	25
6120048R	0.48	0.0189		1	2	25
6120049R	0.49	0.0193		1	2	25
6120050R	0.50	0.0197		1	2.4	25
6120051R	0.51	0.0201	76	1	2.4	25
6120052R	0.52	0.0205		1	2.4	25
6120053R	0.53	0.0209	75	1	2.4	25
6120054R	0.54	0.0213		1	2.8	25
6120055R	0.55	0.0217		1	2.8	25
6120056R	0.56	0.0220		1	2.8	25
6120057R	0.57	0.0224	74	1	2.8	25
6120058R	0.58	0.0228		1	2.8	25
6120059R	0.59	0.0232		1	2.8	25
6120060R	0.60	0.0236		1.5	2.8	30
6120061R	0.61	0.0240	73	1.5	3.3	30
6120062R	0.62	0.0244		1.5	3.3	30
6120063R	0.63	0.0248	72	1.5	3.3	30
6120064R	0.64	0.0252		1.5	3.3	30
6120065R	0.65	0.0256		1.5	3.3	30
6120066R	0.66	0.0260	71	1.5	3.3	30
6120067R	0.67	0.0264		1.5	3.3	30
6120068R	0.68	0.0268		1.5	3.8	30
6120069R	0.69	0.0272		1.5	3.8	30
6120070R	0.70	0.0276		1.5	3.8	30
6120071R	0.71	0.0280	70	1.5	3.8	30

6120 Series Continued

6120 Series Solid Carbide

Drill Sizes 0,72 - 1,65 mm

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire # Frac	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
6120072R	0.72	0.0283		1.5	3.8	30
6120073R	0.73	0.0287		1.5	3.8	30
6120074R	0.74	0.0291	69	1.5	3.8	30
6120075R	0.75	0.0295		1.5	3.8	30
6120076R	0.76	0.0299		1.5	4.2	30
6120077R	0.77	0.0303		1.5	4.2	30
6120078R	0.78	0.0307		1.5	4.2	30
6120079R	0.79	0.0311	68 - 1/32	1.5	4.2	30
6120080R	0.80	0.0315		1.5	4.4	30
6120081R	0.81	0.0319	67	1.5	4.4	30
6120082R	0.82	0.0323		1.5	4.4	30
6120083R	0.83	0.0327		1.5	4.4	30
6120084R	0.84	0.0331	66	1.5	4.4	30
6120085R	0.85	0.0335		1.5	4.4	30
6120086R	0.86	0.0339		1.5	4.8	30
6120087R	0.87	0.0343		1.5	4.8	30
6120088R	0.88	0.0346		1.5	4.8	30
6120089R	0.89	0.0350	65	1.5	4.8	30
6120090R	0.90	0.0354		1.5	4.8	30
6120091R	0.91	0.0358	64	1.5	4.8	30
6120092R	0.92	0.0362		1.5	4.8	30
6120093R	0.93	0.0366		1.5	4.8	30
6120094R	0.94	0.0370	63	1.5	4.8	30
6120095R	0.95	0.0374		1.5	4.8	30
6120096R	0.96	0.0378	62	1.5	4.8	30
6120097R	0.97	0.0382		1.5	4.8	30
6120098R	0.98	0.0386		1.5	4.8	30
6120099R	0.99	0.0390	61	1.5	4.8	30
6120100R	1.00	0.0394		1.5	4.8	30
6120101R	1.01	0.0398	60	1.5	4.8	30
6120102R	1.02	0.0402		1.5	4.8	30
6120103R	1.03	0.0406		1.5	4.8	30
6120104R	1.04	0.0409	59	1.5	4.8	30
6120105R	1.05	0.0413		1.5	4.8	30
6120106R	1.06	0.0417		1.5	4.8	30
6120107R	1.07	0.0421	58	1.5	4.8	30
6120108R	1.08	0.0425		1.5	4.8	30
6120109R	1.09	0.0429	57	1.5	4.8	30
6120110R	1.10	0.0433		1.5	5.4	30
6120111R	1.11	0.0437		1.5	5.4	30
6120112R	1.12	0.0441		1.5	5.4	30
6120113R	1.13	0.0445		1.5	5.4	30
6120114R	1.14	0.0449		1.5	5.4	30
6120115R	1.15	0.0453		1.5	5.4	30
6120116R	1.16	0.0457		1.5	5.4	30
6120117R	1.17	0.0461		1.5	5.4	30
6120118R	1.18	0.0465	56	1.5	5.4	30

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire # Frac	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
6120119R	1.19	0.0469	3/64	1.5	5.4	30
6120120R	1.20	0.0472		1.5	6	30
6120121R	1.21	0.0476		1.5	6	30
6120122R	1.22	0.0480		1.5	6	30
6120123R	1.23	0.0484		1.5	6	30
6120124R	1.24	0.0488		1.5	6	30
6120125R	1.25	0.0492		1.5	6	30
6120126R	1.26	0.0496		1.5	6	30
6120127R	1.27	0.0500		1.5	6	30
6120128R	1.28	0.0504		1.5	6	30
6120129R	1.29	0.0508		1.5	6	30
6120130R	1.30	0.0512		1.5	6.7	30
6120131R	1.31	0.0516		1.5	6.7	30
6120132R	1.32	0.0520	55	1.5	6.7	30
6120133R	1.33	0.0524		1.5	6.7	30
6120134R	1.34	0.0528		1.5	6.7	30
6120135R	1.35	0.0531		1.5	6.7	30
6120136R	1.36	0.0535		1.5	6.7	30
6120137R	1.37	0.0539		1.5	6.7	30
6120138R	1.38	0.0543		1.5	6.7	30
6120139R	1.39	0.0547		1.5	6.7	30
6120140R	1.40	0.0551	54	1.5	6.7	30
6120141R	1.41	0.0555		1.5	6.7	30
6120142R	1.42	0.0559		1.5	6.7	30
6120143R	1.43	0.0563		1.5	6.7	30
6120144R	1.44	0.0567		1.5	6.7	30
6120145R	1.45	0.0571		1.5	6.7	30
6120146R	1.46	0.0575		1.5	6.7	30
6120147R	1.47	0.0579		1.5	6.7	30
6120148R	1.48	0.0583		1.5	6.7	30
6120149R	1.49	0.0587		1.5	6.7	30
6120150R	1.50	0.0591		2	7.2	38
6120151R	1.51	0.0594	53	2	7.2	38
6120152R	1.52	0.0598		2	7.2	38
6120153R	1.53	0.0602		2	7.2	38
6120154R	1.54	0.0606		2	7.2	38
6120155R	1.55	0.0610		2	7.2	38
6120156R	1.56	0.0614		2	7.2	38
6120157R	1.57	0.0618		2	7.2	38
6120158R	1.58	0.0622		2	7.2	38
6120159R	1.59	0.0626	1/16	2	7.2	38
6120160R	1.60	0.0630		2	7.2	38
6120161R	1.61	0.0634	52	2	7.2	38
6120162R	1.62	0.0638		2	7.2	38
6120163R	1.63	0.0642		2	7.2	38
6120164R	1.64	0.0646		2	7.2	38
6120165R	1.65	0.0650		2	7.2	38

SOLD IN 10 PIECE PACKAGES ONLY

6120 Series Continued

6120 Series Solid Carbide

Drill Sizes 1,66 - 2,59 mm

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire # Frac	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
6120166R	1.66	0.0654		2	7.2	38
6120167R	1.67	0.0657		2	7.2	38
6120168R	1.68	0.0661		2	7.2	38
6120169R	1.69	0.0665		2	7.2	38
6120170R	1.70	0.0669	51	2	7.2	38
6120171R	1.71	0.0673		2	7.2	38
6120172R	1.72	0.0677		2	7.2	38
6120173R	1.73	0.0681		2	7.2	38
6120174R	1.74	0.0685		2	7.2	38
6120175R	1.75	0.0689		2	7.2	38
6120176R	1.76	0.0693		2	7.2	38
6120177R	1.77	0.0697		2	7.2	38
6120178R	1.78	0.0701	50	2	7.2	38
6120179R	1.79	0.0705		2	7.2	38
6120180R	1.80	0.0709		2	8.4	38
6120181R	1.81	0.0713		2	8.4	38
6120182R	1.82	0.0717		2	8.4	38
6120183R	1.83	0.0720		2	8.4	38
6120184R	1.84	0.0724		2	8.4	38
6120185R	1.85	0.0728	49	2	8.4	38
6120186R	1.86	0.0732		2	8.4	38
6120187R	1.87	0.0736		2	8.4	38
6120188R	1.88	0.0740		2	8.4	38
6120189R	1.89	0.0744		2	8.4	38
6120190R	1.90	0.0748		2	8.4	38
6120191R	1.91	0.0752		2	8.4	38
6120192R	1.92	0.0756		2	8.4	38
6120193R	1.93	0.0760	48	2	8.4	38
6120194R	1.94	0.0764		2	8.4	38
6120195R	1.95	0.0768		2	8.4	38
6120196R	1.96	0.0772		2	8.4	38
6120197R	1.97	0.0776		2	8.4	38
6120198R	1.98	0.0780	5/64	2	8.4	38
6120199R	1.99	0.0783	47	2	8.4	38
6120200R	2.00	0.0787		3	12	38
6120201R	2.01	0.0791		3	12	38
6120202R	2.02	0.0795		3	12	38
6120203R	2.03	0.0799		3	12	38
6120204R	2.04	0.0803		3	12	38
6120205R	2.05	0.0807		3	12	38
6120206R	2.06	0.0811	46	3	12	38
6120207R	2.07	0.0815		3	12	38
6120208R	2.08	0.0819	45	3	12	38
6120209R	2.09	0.0823		3	12	38
6120210R	2.10	0.0827		3	12	38
6120211R	2.11	0.0831		3	12	38
6120212R	2.12	0.0835		3	12	38

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire # Frac	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
6120213R	2.13	0.0839		3	12	38
6120214R	2.14	0.0843		3	12	38
6120215R	2.15	0.0846		3	12	38
6120216R	2.16	0.0850		3	12	38
6120217R	2.17	0.0854		3	12	38
6120218R	2.18	0.0858	44	3	12	38
6120219R	2.19	0.0862		3	12	38
6120220R	2.20	0.0866		3	12	38
6120221R	2.21	0.0870		3	12	38
6120222R	2.22	0.0874		3	12	38
6120223R	2.23	0.0878		3	12	38
6120224R	2.24	0.0882		3	12	38
6120225R	2.25	0.0886		3	12	38
6120226R	2.26	0.0890	43	3	12	38
6120227R	2.27	0.0894		3	12	38
6120228R	2.28	0.0898		3	12	38
6120229R	2.29	0.0902		3	12	38
6120230R	2.30	0.0906		3	12	38
6120231R	2.31	0.0909		3	12	38
6120232R	2.32	0.0913		3	12	38
6120233R	2.33	0.0917		3	12	38
6120234R	2.34	0.0921		3	12	38
6120235R	2.35	0.0925		3	12	38
6120236R	2.36	0.0929		3	12	38
6120237R	2.37	0.0933		3	12	38
6120238R	2.38	0.0937	3/32	3	12	38
6120239R	2.39	0.0941		3	12	38
6120240R	2.40	0.0945		3	12	38
6120241R	2.41	0.0949		3	12	38
6120242R	2.42	0.0953		3	12	38
6120243R	2.43	0.0957		3	12	38
6120244R	2.44	0.0961	41	3	12	38
6120245R	2.45	0.0965		3	12	38
6120246R	2.46	0.0969		3	12	38
6120247R	2.47	0.0972		3	12	38
6120248R	2.48	0.0976		3	12	38
6120249R	2.49	0.0980	40	3	12	38
6120250R	2.50	0.0984		3	14	38
6120251R	2.51	0.0988		3	14	38
6120252R	2.52	0.0992		3	14	38
6120253R	2.53	0.0996	39	3	14	38
6120254R	2.54	0.1000		3	14	38
6120255R	2.55	0.1004		3	14	38
6120256R	2.56	0.1008		3	14	38
6120257R	2.57	0.1012		3	14	38
6120258R	2.58	0.1016	38	3	14	38
6120259R	2.59	0.1020		3	14	38

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6120 Series Continued

6120 Series Solid Carbide

Drill Sizes 2,60 - 3,00 mm

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire # Frac	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
6120260R	2.60	0.1024		3	14	38
6120261R	2.61	0.1028		3	14	38
6120262R	2.62	0.1031		3	14	38
6120263R	2.63	0.1035		3	14	38
6120264R	2.64	0.1039	37	3	14	38
6120265R	2.65	0.1043		3	14	38
6120266R	2.66	0.1047		3	14	38
6120267R	2.67	0.1051		3	14	38
6120268R	2.68	0.1055		3	14	38
6120269R	2.69	0.1059		3	14	38
6120270R	2.70	0.1063	36	3	14	38
6120271R	2.71	0.1067		3	14	38
6120272R	2.72	0.1071		3	14	38
6120273R	2.73	0.1075		3	14	38
6120274R	2.74	0.1079		3	14	38
6120275R	2.75	0.1083		3	14	38
6120276R	2.76	0.1087		3	14	38
6120277R	2.77	0.1091		3	14	38
6120278R	2.78	0.1094	7/64	3	14	38
6120279R	2.79	0.1098	35	3	14	38
6120280R	2.80	0.1102		3	14	38

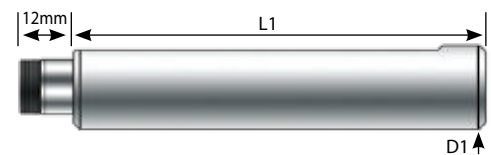
Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire # Frac	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
6120281R	2.81	0.1106		3	14	38
6120282R	2.82	0.1110	34	3	14	38
6120283R	2.83	0.1114		3	14	38
6120284R	2.84	0.1118		3	14	38
6120285R	2.85	0.1122		3	14	38
6120286R	2.86	0.1126		3	14	38
6120287R	2.87	0.1130	33	3	14	38
6120288R	2.88	0.1134		3	14	38
6120289R	2.89	0.1138		3	14	38
6120290R	2.90	0.1142		3	14	38
6120291R	2.91	0.1146		3	14	38
6120292R	2.92	0.1150		3	14	38
6120293R	2.93	0.1154		3	14	38
6120294R	2.94	0.1157		3	14	38
6120295R	2.95	0.1161	32	3	14	38
6120296R	2.96	0.1165		3	14	38
6120297R	2.97	0.1169		3	14	38
6120298R	2.98	0.1173		3	14	38
6120299R	2.99	0.1177		3	14	38
6120300R	3.00	0.1181		3	14	38

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Advanced Precision Micro Tool Holders

Extreme Concentricity for Micro Drills TIR < .0002"

- High performance
- Tight tolerance
- Micro parts production



Collet Sleeves

Item No.	Description	D1	L1	OAL
HSP-CHK-127-026	CHK Collet Sleeve 1/2" Shank	.500"	26mm	38mm
HSP-CHK-190-076	CHK Collet Sleeve 3/4" Shank	.750"	76mm	90mm
HSP-CHK-254-121	CHK Collet Sleeve 1" Shank	1.00"	121mm	133mm

Note: Includes Clamping Nut & Wrench

Precision CHK Collets

Item No.	Description
HSP-CHK-1.0	1.0 mm CHK Collet
HSP-CHK-1.5	1.5 mm CHK Collet
HSP-CHK-2.0	2.0 mm CHK Collet
HSP-CHK-2.5	2.5 mm CHK Collet
HSP-CHK-3.0	3.0 mm CHK Collet
HSP-CHK-3.5	3.5 mm CHK Collet



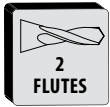
Accessory Components

Item No.	Description
HSP-CHK - NUT	Precision CHK Collet Clamping Nut
HSP-CHK 14 mm	14 mm Flat Wrench



6100 Series

Solid Carbide 5-7 x D – Depth of Cut 120°

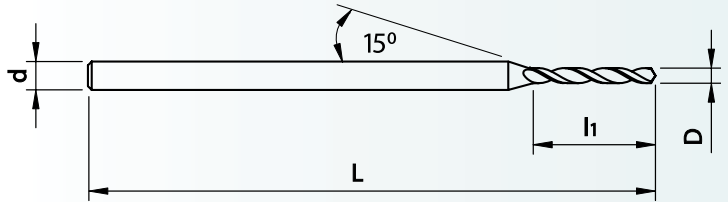


h6 + 0,000
- 0,006 mm

FOR MEDIUM TO HIGH TENSILE STRENGTH STEEL, STAINLESS, TITANIUM ALLOYS & CAST IRON
ALL ITEMS CAN BE ORDERED AS LEFT HAND AT SAME PRICING
SPECIAL, CUSTOM SPECIFICATION ITEMS AVAILABLE

CUSTOM SPECIFICATIONS SUCH AS:

- Helix angle of 15°, 24°, 30° or other.
- Point Angles of 90°, 110°, 130°, 140° or other.
- Special Diameters as 1,255 mm or other.
- Special Tolerances as +/- 0,001 mm or other.
- Coolant Through Drills at 3 & 4 mm shanks & 1,25 to 3 mm flute diameters.
- Coatings available upon request
- Minimum Special Order is 10 Pieces / Spec.
- Lead-Time on Specials – 3 Weeks ARO.



OAL Range 25 - 38 mm

SOLD IN 10 PIECE PACKAGES ONLY

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	fl flute length (mm)	L overall length OAL (mm)
6100010R	0.10	0.0039		1	0.5	25
6100011R	0.11	0.0043		1	0.5	25
6100012R	0.12	0.0047		1	0.5	25
6100013R	0.13	0.0051		1	0.6	25
6100014R	0.14	0.0055		1	0.7	25
6100015R	0.15	0.0059	97	1	1	25
6100016R	0.16	0.0063	96	1	1	25
6100017R	0.17	0.0067	95	1	1	25
6100018R	0.18	0.0071	94	1	1	25
6100019R	0.19	0.0075	93	1	1	25
6100020R	0.20	0.0079	92	1	1.8	25
6100021R	0.21	0.0083	91	1	1.8	25
6100022R	0.22	0.0087	90	1	1.8	25
6100023R	0.23	0.0091	89	1	1.8	25
6100024R	0.24	0.0094	88	1	1.8	25
6100025R	0.25	0.0098		1	2.2	25
6100026R	0.26	0.0102		1	2.2	25
6100027R	0.27	0.0106	86	1	2.2	25
6100028R	0.28	0.0110	85	1	2.2	25
6100029R	0.29	0.0114	84	1	2.2	25
6100030R	0.30	0.0118		1	2.2	25
6100031R	0.31	0.0122		1	2.8	25
6100032R	0.32	0.0126	82	1	2.8	25
6100033R	0.33	0.0130	81	1	2.8	25
6100034R	0.34	0.0134	80	1	2.8	25
6100035R	0.35	0.0138		1	2.8	25

Drill Sizes 0,10 - 0,61 mm

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	fl flute length (mm)	L overall length OAL (mm)
6100036R	0.36	0.0142		1	2.8	25
6100037R	0.37	0.0146	79	1	2.8	25
6100038R	0.38	0.0150		1	2.8	25
6100039R	0.39	0.0154		1	3.6	25
6100040R	0.40	0.0157		1	3.6	25
6100041R	0.41	0.0161	78	1	3.6	25
6100042R	0.42	0.0165		1	3.6	25
6100043R	0.43	0.0169		1	3.6	25
6100044R	0.44	0.0173		1	3.6	25
6100045R	0.45	0.0177		1	3.6	25
6100046R	0.46	0.0181	77	1	3.6	25
6100047R	0.47	0.0185		1	3.6	25
6100048R	0.48	0.0189		1	3.6	25
6100049R	0.49	0.0193		1	4	25
6100050R	0.50	0.0197		1	4	25
6100051R	0.51	0.0201	76	1	4	25
6100052R	0.52	0.0205		1	4	25
6100053R	0.53	0.0209	75	1	4	25
6100054R	0.54	0.0213		1	4	25
6100055R	0.55	0.0217		1	4.5	25
6100056R	0.56	0.0220		1	4.5	25
6100057R	0.57	0.0224	74	1	4.5	25
6100058R	0.58	0.0228		1	4.5	25
6100059R	0.59	0.0232		1	4.5	25
6100060R	0.60	0.0236		1.5	4.5	30
6100061R	0.61	0.0240	73	1.5	5	30

6100 Series Continued

6100 Series Solid Carbide

Drill Sizes 0,62 - 1,53 mm

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire # Frac	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
6100062R	0.62	0.0244		1.5	5	30
6100063R	0.63	0.0248	72	1.5	5	30
6100064R	0.64	0.0252		1.5	5	30
6100065R	0.65	0.0256		1.5	5	30
6100066R	0.66	0.0260	71	1.5	5	30
6100067R	0.67	0.0264		1.5	5	30
6100068R	0.68	0.0268		1.5	5	30
6100069R	0.69	0.0272		1.5	5.6	30
6100070R	0.70	0.0276		1.5	5.6	30
6100071R	0.71	0.0280	70	1.5	5.6	30
6100072R	0.72	0.0283		1.5	5.6	30
6100073R	0.73	0.0287		1.5	5.6	30
6100074R	0.74	0.0291	69	1.5	5.6	30
6100075R	0.75	0.0295		1.5	5.6	30
6100076R	0.76	0.0299		1.5	6.3	30
6100077R	0.77	0.0303		1.5	6.3	30
6100078R	0.78	0.0307		1.5	6.3	30
6100079R	0.79	0.0311	68 - 1/32	1.5	6.3	30
6100080R	0.80	0.0315		1.5	6.3	30
6100081R	0.81	0.0319	67	1.5	6.3	30
6100082R	0.82	0.0323		1.5	6.3	30
6100083R	0.83	0.0327		1.5	6.3	30
6100084R	0.84	0.0331	66	1.5	6.3	30
6100085R	0.85	0.0335		1.5	6.3	30
6100086R	0.86	0.0339		1.5	7.1	30
6100087R	0.87	0.0343		1.5	7.1	30
6100088R	0.88	0.0346		1.5	7.1	30
6100089R	0.89	0.0350	65	1.5	7.1	30
6100090R	0.90	0.0354		1.5	7.1	30
6100091R	0.91	0.0358	64	1.5	7.1	30
6100092R	0.92	0.0362		1.5	7.1	30
6100093R	0.93	0.0366		1.5	7.1	30
6100094R	0.94	0.0370	63	1.5	7.1	30
6100095R	0.95	0.0374		1.5	7.1	30
6100096R	0.96	0.0378	62	1.5	8	30
6100097R	0.97	0.0382		1.5	8	30
6100098R	0.98	0.0386		1.5	8	30
6100099R	0.99	0.0390	61	1.5	8	30
6100100R	1.00	0.0394		1.5	8	30
6100101R	1.01	0.0398	60	1.5	8	30
6100102R	1.02	0.0402		1.5	8	30
6100103R	1.03	0.0406		1.5	8	30
6100104R	1.04	0.0409	59	1.5	8	30
6100105R	1.05	0.0413		1.5	8	30
6100106R	1.06	0.0417		1.5	9	30
6100107R	1.07	0.0421	58	1.5	9	30

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire # Frac	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
6100108R	1.08	0.0425		1.5	9	30
6100109R	1.09	0.0429	57	1.5	9	30
6100110R	1.10	0.0433		1.5	9	30
6100111R	1.11	0.0437		1.5	9	30
6100112R	1.12	0.0441		1.5	9	30
6100113R	1.13	0.0445		1.5	9	30
6100114R	1.14	0.0449		1.5	9	30
6100115R	1.15	0.0453		1.5	9	30
6100116R	1.16	0.0457		1.5	10	30
6100117R	1.17	0.0461		1.5	10	30
6100118R	1.18	0.0465	56	1.5	10	30
6100119R	1.19	0.0469	3/64	1.5	10	30
6100120R	1.20	0.0472		1.5	10	30
6100121R	1.21	0.0476		1.5	10	30
6100122R	1.22	0.0480		1.5	10	30
6100123R	1.23	0.0484		1.5	10	30
6100124R	1.24	0.0488		1.5	10	30
6100125R	1.25	0.0492		1.5	10	30
6100126R	1.26	0.0496		1.5	10	30
6100127R	1.27	0.0500		1.5	10	30
6100128R	1.28	0.0504		1.5	10	30
6100129R	1.29	0.0508		1.5	10	30
6100130R	1.30	0.0512		1.5	10	30
6100131R	1.31	0.0516		1.5	11.2	30
6100132R	1.32	0.0520	55	1.5	11.2	30
6100133R	1.33	0.0524		1.5	11.2	30
6100134R	1.34	0.0528		1.5	11.2	30
6100135R	1.35	0.0531		1.5	11.2	30
6100136R	1.36	0.0535		1.5	11.2	30
6100137R	1.37	0.0539		1.5	11.2	30
6100138R	1.38	0.0543		1.5	11.2	30
6100139R	1.39	0.0547		1.5	11.2	30
6100140R	1.40	0.0551	54	1.5	11.2	30
6100141R	1.41	0.0555		1.5	11.2	30
6100142R	1.42	0.0559		1.5	11.2	30
6100143R	1.43	0.0563		1.5	11.2	30
6100144R	1.44	0.0567		1.5	11.2	30
6100145R	1.45	0.0571		1.5	11.2	30
6100146R	1.46	0.0575		1.5	11.2	30
6100147R	1.47	0.0579		1.5	11.2	30
6100148R	1.48	0.0583		1.5	11.2	30
6100149R	1.49	0.0587		1.5	11.2	30
6100150R	1.50	0.0591		2	12	38
6100151R	1.51	0.0594	53	2	12	38
6100152R	1.52	0.0598		2	12	38
6100153R	1.53	0.0602		2	12	38

SOLD IN 10 PIECE PACKAGES ONLY

6100 Series Continued

6100 Series Solid Carbide

Drill Sizes 1,54 - 1,99 mm

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire # Frac	d shank dia. (mm)	flute length (mm)	L overall length OAL (mm)
6100154R	1.54	0.0606		2	12	38
6100155R	1.55	0.0610		2	12	38
6100156R	1.56	0.0614		2	12	38
6100157R	1.57	0.0618		2	12	38
6100158R	1.58	0.0622		2	12	38
6100159R	1.59	0.0626	1/16	2	12	38
6100160R	1.60	0.0630		2	12	38
6100161R	1.61	0.0634	52	2	12	38
6100162R	1.62	0.0638		2	12	38
6100163R	1.63	0.0642		2	12	38
6100164R	1.64	0.0646		2	12	38
6100165R	1.65	0.0650		2	12	38
6100166R	1.66	0.0654		2	12	38
6100167R	1.67	0.0657		2	12	38
6100168R	1.68	0.0661		2	12	38
6100169R	1.69	0.0665		2	12	38
6100170R	1.70	0.0669	51	2	12	38
6100171R	1.71	0.0673		2	12	38
6100172R	1.72	0.0677		2	12	38
6100173R	1.73	0.0681		2	12	38
6100174R	1.74	0.0685		2	12	38
6100175R	1.75	0.0689		2	12	38
6100176R	1.76	0.0693		2	12	38

SOLD IN 10 PIECE PACKAGES ONLY

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire # Frac	d shank dia. (mm)	flute length (mm)	L overall length OAL (mm)
6100177R	1.77	0.0697		2	12	38
6100178R	1.78	0.0701	50	2	12	38
6100179R	1.79	0.0705		2	12	38
6100180R	1.80	0.0709		2	12	38
6100181R	1.81	0.0713		2	12	38
6100182R	1.82	0.0717		2	12	38
6100183R	1.83	0.0720		2	12	38
6100184R	1.84	0.0724		2	12	38
6100185R	1.85	0.0728	49	2	12	38
6100186R	1.86	0.0732		2	12	38
6100187R	1.87	0.0736		2	12	38
6100188R	1.88	0.0740		2	12	38
6100189R	1.89	0.0744		2	12	38
6100190R	1.90	0.0748		2	12	38
6100191R	1.91	0.0752		2	12	38
6100192R	1.92	0.0756		2	12	38
6100193R	1.93	0.0760	48	2	12	38
6100194R	1.94	0.0764		2	12	38
6100195R	1.95	0.0768		2	12	38
6100196R	1.96	0.0772		2	12	38
6100197R	1.97	0.0776		2	12	38
6100198R	1.98	0.0780	5/64	2	12	38
6100199R	1.99	0.0783	47	2	12	38

For drill sizes 2,00 mm and larger
See our 6120 and 6200 Series

6100 Series Solid Carbide



- For medium to high tensile strength Steel, Stainless, Titanium Alloys and Cast Iron
- Amazing dimension control at h6, h4 & h3 tolerances
- Ultra-fine surface finish for smooth operation
- Micro Grain Carbide with 10% Cobalt Content for outstanding performance & long tool life
- Coatings available upon request

3mm Shank Tools

6200 HP Series

Solid Carbide 6-7 x D - Depth of Cut

h4 Tolerance
HIGH PERFORMANCE!
 Reinforced Shank d 3,0 mm

10% COBALT
MICRO
GRAIN
CARBIDE

RH

140°
Point

30°
Helix

2
FLUTES

HARDNESS
1570
HV30

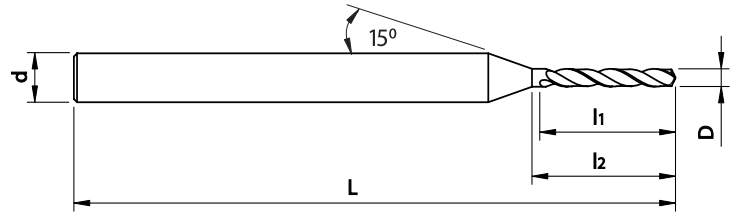
h4

h4 + 0,000
- 0,003 mm

HIGH PERFORMANCE DRILL, WIDE RANGE APPLICATIONS, STEELS, CAST IRON & NON-FERROUS METALS
ALL ITEMS CAN BE ORDERED AS LEFT HAND AT SAME PRICING
SPECIAL, CUSTOM SPECIFICATION ITEMS AVAILABLE

CUSTOM SPECIFICATIONS SUCH AS:

- Helix angle of 15°, 24°, 35° or other.
- Point Angles of 90°, 110°, 120°, 130° or other.
- Special Diameters as 0,92 mm or other.
- Special Tolerances as +/- 0,001 mm or other.
- Coolant Through Drills at 3 & 4 mm shanks & 1,25 to 3 mm flute diameters.
- Coatings available upon request.
- Minimum Special Order is 10 Pieces.
- Lead-Time on Specials – 3 Weeks ARO.



OAL 50 mm

Drill Sizes 0,50 - 3,00 mm

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	l2 Dlength (mm)	L overall length OAL (mm)
6200050R	0.50	0.0197		3	3.5	4.4	50
6200055R	0.55	0.0217		3	4	5	50
6200060R	0.60	0.0236		3	4.5	5.6	50
6200065R	0.65	0.0256		3	5	6.3	50
6200070R	0.70	0.0276		3	5	6.3	50
6200075R	0.75	0.0295		3	5.5	6.9	50
6200080R	0.80	0.0315		3	5.6	7.2	50
6200085R	0.85	0.0335		3	6	7.6	50
6200090R	0.90	0.0354		3	6.5	8.1	50
6200095R	0.95	0.0374		3	6.7	8.5	50
6200100R	1.00	0.0394		3	7	8.8	50
6200105R	1.05	0.0413		3	7.5	9.4	50
6200110R	1.10	0.0433		3	8	10.1	50
6200115R	1.15	0.0453		3	8.1	10.4	50
6200120R	1.20	0.0472		3	8.5	11	50
6200125R	1.25	0.0492		3	8.9	11.3	50
6200130R	1.30	0.0512		3	9.2	11.7	50
6200135R	1.35	0.0531		3	9.6	12.2	50
6200140R	1.40	0.0551	54	3	10	12.5	50
6200145R	1.45	0.0571		3	10.5	13	50
6200150R	1.50	0.0591		3	10.5	13	50
6200155R	1.55	0.0610		3	11	13.5	50
6200160R	1.60	0.0630		3	11.5	14	50
6200165R	1.65	0.0650		3	12	15	50
6200170R	1.70	0.0669	51	3	12	15	50
6200175R	1.75	0.0689		3	12.5	15.5	50

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	l2 Dlength (mm)	L overall length OAL (mm)
6200180R	1.80	0.0709		3	13	16	50
6200185R	1.85	0.0728	49	3	13	16	50
6200190R	1.90	0.0748		3	13.5	17.5	50
6200195R	1.95	0.0768		3	14	18	50
6200200R	2.00	0.0787		3	14	18	50
6200205R	2.05	0.0807		3	14.5	18.5	50
6200210R	2.10	0.0827		3	15	19	50
6200215R	2.15	0.0846		3	15	19	50
6200220R	2.20	0.0866		3	16	20	50
6200225R	2.25	0.0886		3	16	20	50
6200230R	2.30	0.0906		3	16.5	21	50
6200235R	2.35	0.0925		3	16.5	21	50
6200240R	2.40	0.0945		3	17	22	50
6200245R	2.45	0.0965		3	17.5	22.5	50
6200250R	2.50	0.0984		3	18	23	50
6200255R	2.55	0.1004		3	18	23	50
6200260R	2.60	0.1024		3	18.5	23.5	50
6200265R	2.65	0.1043		3	18.5	23.5	50
6200270R	2.70	0.1063	36	3	19	24	50
6200275R	2.75	0.1083		3	19	24	50
6200280R	2.80	0.1102		3	20	25	50
6200285R	2.85	0.1122		3	20	25	50
6200290R	2.90	0.1142		3	21	26	50
6200295R	2.95	0.1161	32	3	21	26	50
6200300R	3.00	0.1181		3	21	26	50

SOLD IN 10 PIECE PACKAGES ONLY

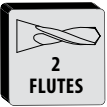
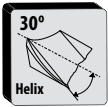
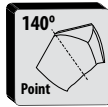
6220 HP Series

3mm Shank Tools



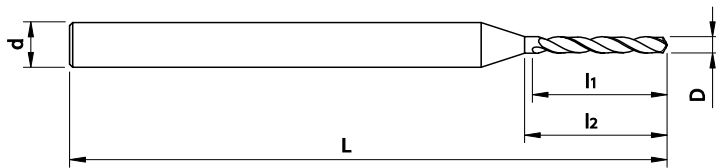
Solid Carbide 12 x D – Depth of Cut

h5 Tolerance
HIGH PERFORMANCE!
 Reinforced Shank d 3,0 mm



h5 + 0,000
 - 0,004 mm

HIGH PERFORMANCE DRILL WITH REINFORCED SHANK AT 3,00mm
SPOT/CENTER DRILL RECOMMENDED FOR BETTER HOLE STRAIGHTNESS - WITH 6140 SERIES
FOR SOFT, MEDIUM & TENSILE STRENGTH STEELS, STAINLESS, TITANIUM, ALLOYS & CAST IRON
HIGH PERFORMANCE WITH OUTSTANDING SURFACE FINISHES WITH STRONG CORE - NO DEVIATION
ALL ITEMS CAN BE QUOTED AS LEFT HAND CUT - CONTACT US



OAL Range 50 - 60 mm

CUSTOM SPECIFICATIONS SUCH AS:

- Size range from 0,5mm to 2,00mm in increments of 0,05mm.
- Intermediate sizes upon request.
- Special sizes, Point Angles and Tolerances available.
- Minimum Special Order is 10 Pieces.
- Lead-Time on Specials is 3-4 Weeks ARO

Drill Sizes 0,50 - 2,00 mm

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	l2 Dlength (mm)	L overall length OAL (mm)
6220050R	0.50	0.0197		3.00	6	7.2	50
6220055R	0.55	0.0217		3.00	6.6	7.9	50
6220060R	0.60	0.0236		3.00	7.2	8.6	50
6220065R	0.65	0.0256		3.00	7.8	9.4	50
6220070R	0.70	0.0276		3.00	8.4	10.1	50
6220075R	0.75	0.0295		3.00	9	10.8	50
6220080R	0.80	0.0315		3.00	9.6	11.5	50
6220085R	0.85	0.0335		3.00	10.2	12.2	50
6220090R	0.90	0.0354		3.00	10.8	13.0	50
6220095R	0.95	0.0374		3.00	11.4	13.7	50
6220100R	1.00	0.0394		3.00	12	14.4	50
6220105R	1.05	0.0413		3.00	12.6	15.1	50
6220110R	1.10	0.0433		3.00	13.2	15.8	50
6220115R	1.15	0.0453		3.00	13.8	16.6	50
6220120R	1.20	0.0472		3.00	14.4	17.3	50
6220125R	1.25	0.0492		3.00	15	18.0	50

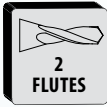
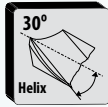
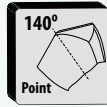
Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	l2 Dlength (mm)	L overall length OAL (mm)
6220130R	1.30	0.0512		3.00	15.6	18.7	50
6220135R	1.35	0.0531		3.00	16.2	19.4	50
6220140R	1.40	0.0551	54	3.00	16.8	20.2	50
6220145R	1.45	0.0571		3.00	17.4	20.9	50
6220150R	1.50	0.0591		3.00	18	21.6	50
6220155R	1.55	0.0610		3.00	18.6	22.3	60
6220160R	1.60	0.0630		3.00	19.2	23.0	60
6220165R	1.65	0.0650		3.00	19.8	23.8	60
6220170R	1.70	0.0669	51	3.00	20.4	24.5	60
6220175R	1.75	0.0689		3.00	21	25.2	60
6220180R	1.80	0.0709		3.00	21.6	25.9	60
6220185R	1.85	0.0728	49	3.00	22.2	26.6	60
6220190R	1.90	0.0748		3.00	22.8	27.4	60
6220195R	1.95	0.0768		3.00	23.4	28.1	60
6220200R	2.00	0.0787		3.00	24	28.8	60

SOLD IN 10 PIECE PACKAGES ONLY

6230 CT Series 3mm Shank Tools

Coolant-Thru 15 x D - Depth of Cut

h5 Tolerance
2-Flutes Drill with
2 Helicoidal Internal Holes



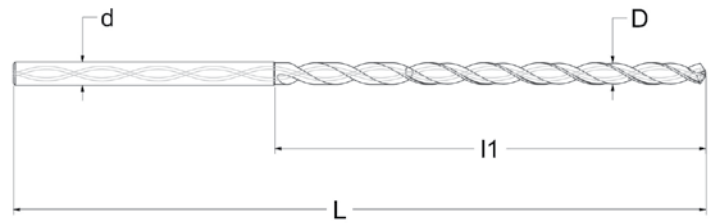
h5 + 0,000
- 0,004 mm



HIGH PERFORMANCE-COOLANT-THRU MICRO DRILLS WITH A STRONG WEB FOR MAXIMUM ALIGNMENT & ACCURACY. COOLANT-THRU TO OPTIMIZE LUBRICATION, CHIP REMOVAL & COOLING. IDEAL FOR A WIDE RANGE OF APPLICATIONS, MEDIUM & HIGH TENSILE STRENGTH STEELS, STAINLESS STEEL, TITANIUM-ALLOYS, CAST IRON. STANDARD SIZES IN 0,05MM INCREMENTS, BUT INTERMEDIATE SIZES UPON REQUEST.

CUSTOM SPECIFICATIONS SUCH AS:

- Point Angles of 90°, 110°, 120°, 130° or other.
- Special Diameters as 2,03 mm or other.
- Special Tolerances as +/- 0,001 mm or other.
- Coolant Through Drills at 3 & 4 mm shanks & 1,50 to 3 mm flute diameters.
- Minimum Special Order is 10 Pieces.
- Lead-Time on Specials – 4 Weeks ARO/6 Weeks for Coated.



OAL 70 - 90 mm



Drill Sizes 2,05 - 3,00 mm

Order Number	Coating TiAlN order # with "RC" suffix	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire # Frac	d shank dia. (mm)	l1 flute length (mm)	L overall Dlength OAL (mm)
6230205R	6230205RC	2.05	0.0807		3.00	34	70
6230210R	6230210RC	2.10	0.0827		3.00	34	70
6230215R	6230215RC	2.15	0.0846		3.00	36	70
6230220R	6230220RC	2.20	0.0866		3.00	36	70
6230225R	6230225RC	2.25	0.0886		3.00	38	70
6230230R	6230230RC	2.30	0.0906		3.00	38	70
6230235R	6230235RC	2.35	0.0925		3.00	40	70
6230240R	6230240RC	2.40	0.0945		3.00	40	70
6230245R	6230245RC	2.45	0.0965		3.00	42	70
6230250R	6230250RC	2.50	0.0984		3.00	42	70
6230255R	6230255RC	2.55	0.1004		3.00	44	90
6230260R	6230260RC	2.60	0.1024		3.00	44	90
6230265R	6230265RC	2.65	0.1043		3.00	46	90
6230270R	6230270RC	2.70	0.1063		3.00	46	90
6230275R	6230275RC	2.75	0.1083	36	3.00	48	90
6230280R	6230280RC	2.80	0.1102		3.00	48	90
6230285R	6230285RC	2.85	0.1122		3.00	50	90
6230290R	6230290RC	2.90	0.1142		3.00	50	90
6230295R	6230295RC	2.95	0.1161	32	3.00	50	90
6230300R	6230300RC	3.00	0.1181		3.00	50	90

All 6230 Series Drills Sold in Single Unit Packages

FEATURES:

- For holes with depth 15 x diameter.
- Solid Tungsten Carbide Sub-micro grain with 2 helicoidal holes.
- Right-cut, point geometry for self-centering
- Standard sizes in increments of 0,05mm.
- Other diameters and lengths on request.
- Available uncoated or TiAlN coated.

BENEFITS:

- Higher drilling speed and longer tool life.
- Suitable for specific materials.
- High precision with h5 tolerances.
- Strong, no deviation, maximum alignment accuracy.
- Optimum cooling, lubrication and chip removal.
- **All 6230 Series Drills Sold in Single Unit Packages!**

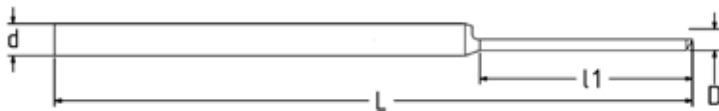
1100 Series

Solid Carbide Half Round Gun Drills 10 x Depth of Cut



h5 Tolerance
h5 + 0,000
- 0,004 mm

DIRECT DRILLING, NO CENTERING REQUIRED, GOOD CHIP EVACUATION, HIGH PERFORMANCE IN BRASS CONNECTORS FOR SOFT MATERIALS, BRASS, COPPER, GOLD, SILVER & STAINLESS, TITANIUM ALLOYS
SINGLE LIP HALF ROUND FOR OUTSTANDING COOLANT FLOW & FINE SURFACE FINISHES
ALL ITEMS CAN BE ORDERED AS LEFT HAND CUT AT SAME PRICING
SPECIAL, CUSTOM SPECIFICATION ITEMS AVAILABLE



OAL Range 30 - 38 - 50 mm

CUSTOM SPECIFICATIONS SUCH AS:

- Size range from 0,20mm to 3,00mm in increments of 0,05mm.
- Intermediate sizes upon request.
- Special sizes and tolerances available.
- Minimum Special Order is 10 Pieces.
- Lead-Time on Specials is 3-4 Weeks ARO.

Drill Sizes 0,20 - 3,00 mm

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
1100020R	0.20	0.0079		1.50	2.00	30
1100025R	0.25	0.0098		1.50	2.50	30
1100030R	0.30	0.0118		1.50	3.00	30
1100035R	0.35	0.0138		1.50	3.50	30
1100040R	0.40	0.0157		1.50	4.00	30
1100045R	0.45	0.0177		1.50	4.50	30
1100050R	0.50	0.0197		1.50	5.00	30
1100055R	0.55	0.0217		1.50	5.50	30
1100060R	0.60	0.0236		1.50	6.00	30
1100065R	0.65	0.0256		1.50	6.50	30
1100070R	0.70	0.0276		1.50	7.00	30
1100075R	0.75	0.0295		1.50	7.50	30
1100080R	0.80	0.0315		1.50	8.00	30
1100085R	0.85	0.0335		1.50	8.50	30
1100090R	0.90	0.0354		1.50	9.00	30
1100095R	0.95	0.0374		1.50	9.50	30
1100100R	1.00	0.0394		1.50	10.00	30
1100105R	1.05	0.0413		1.50	10.50	30
1100110R	1.10	0.0433		1.50	11.00	30
1100115R	1.15	0.0453		1.50	11.50	30
1100120R	1.20	0.0472		1.50	12.00	30
1100125R	1.25	0.0492		1.50	12.50	30
1100130R	1.30	0.0512		1.50	13.00	30
1100135R	1.35	0.0531		1.50	13.50	30

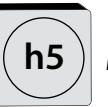
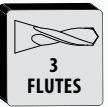
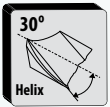
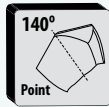
Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
1100140R	1.40	0.0551	54	1.50	14.00	30
1100145R	1.45	0.0571		1.50	14.50	30
1100150R	1.50	0.0591		2.00	15.00	38
1100155R	1.55	0.0610		2.00	15.5	38
1100160R	1.60	0.0630		2.00	16.00	38
1100165R	1.65	0.0650		2.00	16.50	38
1100170R	1.70	0.0669	51	2.00	17.00	38
1100175R	1.75	0.0689		2.00	17.50	38
1100180R	1.80	0.0709		2.00	18.00	38
1100185R	1.85	0.0728	49	2.00	18.50	38
1100190R	1.90	0.0748		2.00	19.00	38
1100195R	1.95	0.0768		2.00	19.50	38
1100200R	2.00	0.0787		3.00	20.00	50
1100210R	2.10	0.0827		3.00	21.00	50
1100220R	2.20	0.0866		3.00	22.00	50
1100230R	2.30	0.0906		3.00	23.00	50
1100240R	2.40	0.0945		3.00	24.00	50
1100250R	2.50	0.0984		3.00	25.00	50
1100260R	2.60	0.1024		3.00	26.00	50
1100270R	2.70	0.1063	36	3.00	27.00	50
1100280R	2.80	0.1102		3.00	28.00	50
1100290R	2.90	0.1142		3.00	29.00	50
1100300R	3.00	0.1181		3.00	30.00	50

3mm Shank Tools

3100 Series Short

Solid Carbide 3 Flute SHORT Cross Drills

h5 Tolerance
Reinforced Shank d 3,0 mm

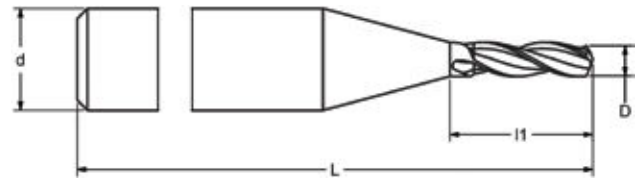


h5 + 0,000
- 0,004 mm

**HIGH PERFORMANCE DRILL, 3-FLUTES FOR DRILLING & REAMING IN ONE OPERATION
FOR SOFT, MEDIUM & TENSILE STRENGTH STEELS, STAINLESS, TITANIUM, ALLOYS & CAST IRON
GOOD FOR TRANSVERSAL DRILLING WITH NO BURRS INSIDE CUT & STRONG WEB WITH NO DEVIATION
SPECIAL, CUSTOM SPECIFICATION ITEMS AVAILABLE**

CUSTOM SPECIFICATIONS SUCH AS:

- Only available in right hand cut.
- Size range from 0,5mm to 3,00mm in increments of 0,05 or 0,10mm.
- Intermediate sizes upon request.
- Special sizes and tolerances available.
- Minimum Special Order is 10 Pieces.
- Lead-Time on Specials is 3-4 Weeks ARO



OAL 30 mm

Drill Sizes 0,50 - 1,50 mm

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
3100050R	0.50	0.0197		3	3.00	30
3100055R	0.55	0.0217		3	3.00	30
3100060R	0.60	0.0236		3	3.00	30
3100065R	0.65	0.0256		3	3.00	30
3100070R	0.70	0.0276		3	3.00	30
3100075R	0.75	0.0295		3	3.50	30
3100080R	0.80	0.0315		3	3.50	30
3100085R	0.85	0.0335		3	3.50	30
3100090R	0.90	0.0354		3	3.50	30
3100095R	0.95	0.0374		3	3.50	30
3100100R	1.00	0.0394		3	3.50	30

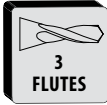
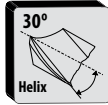
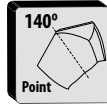
Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
3100105R	1.05	0.0413		3	4.00	30
3100110R	1.10	0.0433		3	4.00	30
3100115R	1.15	0.0453		3	4.00	30
3100120R	1.20	0.0472		3	4.00	30
3100125R	1.25	0.0492		3	4.00	30
3100130R	1.30	0.0512		3	5.00	30
3100135R	1.35	0.0531		3	5.00	30
3100140R	1.40	0.0551	54	3	5.00	30
3100145R	1.45	0.0571		3	5.00	30
3100150R	1.50	0.0591		3	5.00	30

SOLD IN 10 PIECE PACKAGES ONLY

3mm Shank Tools

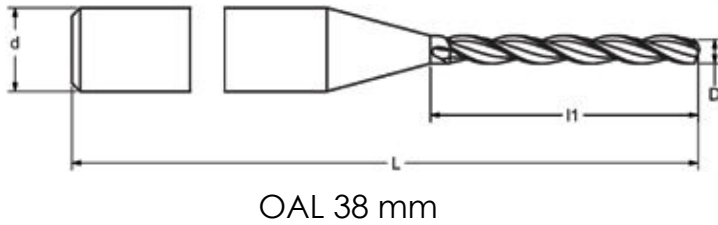
3200 Series Long Solid Carbide 3 Flute LONG Reamer Drills

h5 Tolerance
Reinforced Shank d 3,0 mm



h5 + 0,000
- 0,004 mm

HIGH PERFORMANCE DRILL, 3-FLUTES FOR DRILLING & REAMING IN ONE OPERATION FOR SOFT, MEDIUM & TENSILE STRENGTH STEELS, STAINLESS, TITANIUM, ALLOYS & CAST IRON GOOD FOR TRANSVERSAL DRILLING WITH NO BURRS INSIDE CUT & STRONG WEB WITH NO DEVIATION SPECIAL, CUSTOM SPECIFICATION ITEMS AVAILABLE



CUSTOM SPECIFICATIONS SUCH AS:

- Only available in right hand cut.
- Size range from 0,5mm to 3,00mm in increments of 0,05 or 0,10mm.
- Intermediate sizes upon request.
- Special sizes and tolerances available.
- Minimum Special Order is 10 Pieces.
- Lead-Time on Specials is 3-4 Weeks ARO.

Drill Sizes 0,50 - 3,00 mm

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
3200050R	0.50	0.0197		3	6.00	38
3200055R	0.55	0.0217		3	7.00	38
3200060R	0.60	0.0236		3	7.00	38
3200065R	0.65	0.0256		3	7.00	38
3200070R	0.70	0.0276		3	9.50	38
3200075R	0.75	0.0295		3	9.50	38
3200080R	0.80	0.0315		3	9.50	38
3200085R	0.85	0.0335		3	9.50	38
3200090R	0.90	0.0354		3	9.50	38
3200095R	0.95	0.0374		3	9.50	38
3200100R	1.00	0.0394		3	9.50	38
3200105R	1.05	0.0413		3	10.50	38
3200110R	1.10	0.0433		3	10.50	38
3200115R	1.15	0.0453		3	10.50	38
3200120R	1.20	0.0472		3	10.50	38
3200125R	1.25	0.0492		3	10.50	38
3200130R	1.30	0.0512		3	10.50	38
3200135R	1.35	0.0531		3	10.50	38

Order Number	D flute dia. (mm)	D dec. equiv. flute dia. (inch)	Wire #	d shank dia. (mm)	l1 flute length (mm)	L overall length OAL (mm)
3200140R	1.40	0.0551	54	3	10.50	38
3200145R	1.45	0.0571		3	10.50	38
3200150R	1.50	0.0591		3	10.50	38
3200160R	1.60	0.0630		3	12.00	38
3200170R	1.70	0.0669	51	3	12.00	38
3200180R	1.80	0.0709		3	12.00	38
3200190R	1.90	0.0748		3	12.00	38
3200200R	2.00	0.0787		3	12.00	38
3200210R	2.10	0.0827		3	14.00	38
3200220R	2.20	0.0866		3	14.00	38
3200230R	2.30	0.0906		3	14.00	38
3200240R	2.40	0.0945		3	14.00	38
3200250R	2.50	0.0984		3	14.00	38
3200260R	2.60	0.1024		3	16.00	38
3200270R	2.70	0.1063	36	3	16.00	38
3200280R	2.80	0.1102		3	16.00	38
3200290R	2.90	0.1142		3	16.00	38
3200300R	3.00	0.1181		3	16.00	38

SOLD IN 10 PIECE PACKAGES ONLY

SPEEDS & FEEDS CHART

Cutting Speed - RPM = SFM X 97 / Drill Dia.

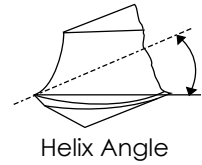
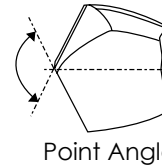
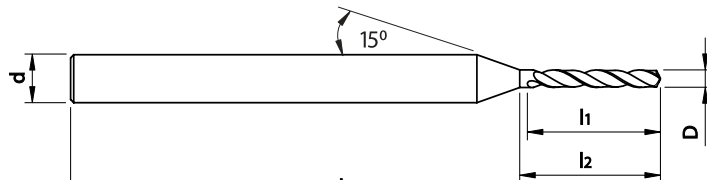
Feed Rate - IPM = RPM X IPR

Guidelines - Not Guaranteed

MATERIAL	DIAMETER (mm)	SPEED (SFM)	FEED RATE (IPR)
MILD & LOW CARBON STEELS	.10 - .50	40 - 80	.0002 - .0003
	.51 - .70	80 - 140	.0003 - .0004
	.71 - .99	140 - 200	.0004 - .0006
	1.00 - 2.00	140 - 200	.0006 - .0016
	2.01 - 3.00	140 - 200	.0016 - .0020
HIGH CARBON, ALLOY STEELS	.10 - .50	30 - 70	.0002 - .0003
	.51 - .70	70 - 100	.0002 - .0004
	.71 - .99	70 - 100	.0004 - .0006
	1.00 - 2.00	100 - 170	.0006 - .0016
	2.01 - 3.00	100 - 170	.0014 - .0020
STAINLESS STEELS - 300 SERIES, 17-4	.10 - .50	20 - 40	.0001 - .0002
	.51 - .70	40 - 70	.0002 - .0003
	.71 - .99	70 - 120	.0002 - .0003
	1.00 - 2.00	70 - 120	.0003 - .0010
	2.01 - 3.00	70 - 120	.0008 - .0014
STAINLESS STEELS - 400 SERIES	.10 - .50	30 - 60	.0001 - .0002
	.51 - .70	60 - 90	.0002 - .0003
	.71 - .99	90 - 140	.0003 - .0004
	1.00 - 2.00	90 - 140	.0004 - .0012
	2.01 - 3.00	90 - 140	.0010 - .0018
CAST IRON	.10 - .50	70 - 160	.0002 - .0003
	.51 - .70	160 - 200	.0003 - .0004
	.71 - .99	200 - 340	.0004 - .0008
	1.00 - 2.00	200 - 340	.0008 - .0020
	2.01 - 3.00	200 - 340	.0016 - .0026
DUCTILE IRON	.10 - .50	60 - 100	.0001 - .0002
	.51 - .70	100 - 140	.0002 - .0003
	.71 - .99	140 - 270	.0003 - .0006
	1.00 - 2.00	140 - 270	.0006 - .0016
	2.01 - 3.00	140 - 270	.0014 - .0024
ALUMINUM	.10 - .50	80 - 170	.0002 - .0003
	.51 - .70	170 - 270	.0003 - .0005
	.71 - .99	270 - 400	.0005 - .0008
	1.00 - 2.00	270 - 400	.0008 - .0024
	2.01 - 3.00	270 - 400	.0020 - .0031
HIGH ALLOYS - INCONEL, TITANIUM	.10 - .50	30 - 70	.0001 - .0002
	.51 - .70	70 - 100	.0002 - .0003
	.71 - .99	100 - 170	.0003 - .0004
	1.00 - 2.00	100 - 170	.0004 - .0012
	2.01 - 3.00	100 - 170	.0010 - .0018



REQUEST FOR QUOTATION FORM



CUSTOM SPECIFICATIONS:

- _____ Right or Left Cutting
- _____ "D" flute diameter
- _____ "d" shank diameter
- _____ "l1" flute length
- _____ "L" overall length OAL
- _____ Special Coating
- _____ Helix Angle of 15°, 24°, 35° or other.
- _____ Point Angles of 90°, 110°, 120°, 130° or other.
- _____ Special Diameters as 0.92 mm or other.
- _____ Special Tolerances as +/- 0.001 mm or other.
- _____ Coolant Through Drills at 3 & 4 mm shanks & 1.25 to 3 mm flute diameters.

Please check one:

- Solid Carbide
- HSS-E Cobalt %

Supply Tool Print/Drawing if Possible • Minimum Special Order is 10 Pieces / per Specification
Lead-Time on Specials – 3 Weeks ARO • SOLD IN 10 PIECE PACKAGES ONLY

Date: _____

Name: _____

Title: _____

Company Name: _____

Street Address: _____

Address-line 2: _____

City: _____ State: _____ Zip: _____

Telephone: _____ Fax: _____

E-mail: _____ Country: _____

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